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Supreme Court, U.S.
FILED

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No.

In The
Supreme Court for the United States
Term, October 1994

Nicolas Kaliardos,
Petitioner

v.

General Motors Corporation,

BASF Corporation,

H.B. Fuller Company, and

H.B. Fuller Automotive Products, Inc.,

Jointly and Severally,
Respondents

and

Daubert Industries, Inc.,
Respondent.

Petition for Writ of Certiorari to the United States Court of Appeals for the Federal Circuit

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Petition for Writ of Certiorari

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QUESTIONS PRESENTED FOR REVIEW RULE 14.1(a)

1. Did the Magistrate judge in the trial court error in holding that the evidence produced by Plaintiff in response to Defendant's motion for summary judgement did not create a genuine issue of material fact concerning whether accused product infringed asserted claims, either

literally or

under the doctrine of equivalents

such as to require a full trial?

2. Did the trial judge in the trial court error in adopting the report and recommendation of the Magistrate judge and dismissing Plaintiff's action on the merits and by

abusing its discretion in denying Plaintiff's motion for leave to supplement his responses with a test report

of his expert and/or in not granting Kaliardos' request for an oral hearing?

3. Did the Appeals Court error in affirming the District Courts dismissal of Plaintiff Appellant's case considering the evidence Kaliardos offered and the plain language and historical intent of the application of Federal Rule 56?

4. Is the Federal Judiciary using Rule 56 to rid their dockets of difficult cases and/or litigants and if so will such use of Rule 56 be allowed to continue?

PARTIES TO THE PROCEEDING
RULE 14.1(b)

All parties to the proceeding in the Court of Appeals for the Federal Circuit, whose judgement is sought to be reviewed, appear in the case caption and are:

Nicolas Kaliardos,
Plaintiff-Appellant-Petitioner

v.

General Motors Corporation,
Defendant-Appellee-Respondent,

BASF Corporation,
Defendant-Appellee-Respondent,

H.B. Fuller Company,
Defendant-Appellee-Respondent,

H.B. Fuller Automotive Products, Inc.
Defenant-Appellee-Respondent,
Jointly and Severally,

Daubert Industries, Inc.,
Defendant-Appellee-Respondent.

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3. Vas-Cath Inc. v. Mahurkar, 19 USPQ2d 1111, (Fed. Cir. 1991).

4. C.R. Bard, Inc. v. Advanced Cardiovascular Systems, 911 F2d 670,673, 15 USPQ154d, 1542-43, (Fed. Cir. 1990).

5. Mathews v. Weber, 423 U.S. 261, 96 S. Ct. 549 (1976).

6. Anderson v. Liberty Lobby, Inc. et al., 477 U.S. 242, 106 S. Ct. 2505 (1986).

7. Lemelson v. TRW, Inc., 760 F2d 1254, 1260, 225 USPQ 697,700 (Fed. Cir. 1985).

8. Cornell v. Sears, Roebuck & Co., 722 F2d 1542, 1546, 220 USPQ 193,197 (Fed. Cir. 1983).

9. Federal Laboratories, Inc. v. Barringer Research Limited et al., 696 F2d 271, 217 USPQ 114 (Fed. Cir. 1982).

10. Landau v. J.D. Barter Construction Company, Inc., 657 F2d 158, 211 USPQ 861 (7th Cir. 1981).

11. Continental Paper Bag Co. v. Eastern Paper Bag Co., 210 U.S. 405 (1908).

12. Gould Inc. v. United States, 195 USPQ 112 (U.S. Ct. Cls., 1977).

13. Acme Highway Products Corp. v. D.S. Brown Co., 177 USPQ 130 (6th Cir. 1973).

14. Intel Corp. v. International Trade Commission, 20 USPQ 2d 1161 (Fed. Cir. 1161).

15. Grawer Tank & Mfg. Co., Inc. et al. v. Linde Air Products Co., 339 U.S. 605; 85 USPQ 328 (1950).

16. Kistner v. Califano, (CA 6 Ohio).

17. Dredge Corp. v. Penny, 338 F2d 456 (CA 9 1964).

CONCISE STATEMENT OF THE GROUNDS ON WHICH THE JURISDICTION OF THE SUPREME COURT OF THE UNITED STATES IS INVOKED RULE 14.1(e)

(i) The date of the entry of the judgement or decree sought to be reviewed is November 22, 1994.

(ii) There was no request for rehearing and therefore no order respecting a rehearing. An extension of time within which to file a petition for a writ of Certiorari was granted to and including 21 March 1995 on 24 February 1995.

(iii) There has been no cross petition for a writ of certiorari and therefore no express reliance on Rule 12.3.

(iv) The statutory provisions believed to confer on this Court jurisdiction to review the judgement for which application for writ of certiorari is made are as follows.

Jurisdiction in the United States Supreme Court is by writ of certiorari as indicated in the below quoted portions of Rule 10 of the Rules of the Supreme Court of the United States.

PART III. JURISDICTION ON WRIT OF CERTIORARI

Rule 10. Considerations Governing Review of Writ of Certiorari

1. A review on writ of certiorari is not a matter of right, but of judicial discretion. A petition for a writ of certiorari will be granted only when there are special and important reasons therefor. The following, while neither controlling nor fully measuring the Court's discretion, indicate the character of reasons that will be considered.

(a) When a United States court of appeals has rendered a decision in conflict with the decision of another United States court of appeals on the same matter, or has decided a federal question in a way in conflict with a state court of last resort; or has so far departed from the accepted and usual course of judicial proceedings, or sanctioned such a departure by a lower court, as to call for an excercise of this Court's power of supervision.

The Federal Court of Appeals For The Federal Circuit has "so far departed from the accepted and usual course of judicial proceedings, and/or sanctioned such a departure by the United States District Court for the Eastern District of Michigan, Southern Division, Detroit, as to call for an exercise of this Court's power of supervision."

Jurisdiction in the United States Supreme Court is further based on 28 USC 1254(1).

> (1) By writ of certiorari granted upon the petition of any party to any civil or criminal case, before or after rendition of judgement or decree.

THE CONSTITUTIONAL PROVISIONS, TREATIES, STATUTES, ORDINANCES AND REGULATIONS INVOLVED, RULE 14.1(f)

1. 35 U.S.C. §271(a)(b) & (c)

2. Federal Rules of Civil Procedure 11, 34, 36, 37, 56(e), and 72(b)

3. Federal Rules of Evidence 702

4. Federal Magistrate's Acts Section 636(b)

STATEMENT OF THE CASE
RULE 14.1(g)

Nature of the Case and Proceedings Below

This is an appeal from the decision of the U.S. District Court, Eastern District of Michigan, Southern Division which granted Appellees' Rule 56 Motions for Summary Judgement of Patent Non-Infringement and dismissed Appellant Kaliardos' suit against the Appellees, General Motors Corporation (General Motors), BASF Corporation (BASF), H.B. Fuller Company and H.B. Fuller Automotive Products, Inc. (Fuller), and Daubert Industries Inc. (Daubert). (A1,

The Complaint and Jury demand were filed on September 14, 1988.

The patents which are the subject of this appeal, U.S. 3,959,530 ('530 patent) and 4,356,036 ('036 patent) are for anti-corrosive coatings. (A3, ; A4)

The accused coatings were used by General Motors to prevent corrosion in its automobiles.

The coatings were supplied to General Motors by Appellees BASF, Fuller and Daubert.

Disputes During the Pre-Trial

During 5 1/2 years of pre-trial activity, there were a number of disputes regarding the compositions of the Appellees' coatings.

Daubert refused to produce samples of its coatings which were requested under Rule 34. Daubert promised to produce samples "in due course" in its response to a Rule 34 request, delayed until discovery ended, and then refused to supply samples.

More disputes centered on laboratory analyses of a BASF coating and coatings

taken from General Motors' vehicles. An initial analyses conducted by Kaliardos' experts showed that ingredients were in the coatings which were not disclosed in the documents which the Appellees produced to Kaliardos. General Motors and the other Appellees refused to accept the initial laboratory analyses and denied adding the disputed ingredients to their coatings.

Whether General Motors or the other Appellees added these disputed ingredients to the coatings used by General Motors is an issue of material fact.

The refusals of the Appellees to accept the initial laboratory analysis of the coatings caused Kaliardos to obtain a second analysis of the BASF coating by a second company. The analysis of the second company resulted in further disputes.

The Appellees examined the laboratories, copied records, deposed their chemists and filed motions to strike affidavits of the chemists which supported Kaliardos' responses to their summary judgement motions.

The Appellees' attacks on Kaliardos' evidence, motions and depositions produced a record which was difficult for a technically unskilled person to follow. As will be seen from the Magistrate's report and recommendation, the Magistrate had difficulty in understanding the evidence (A6,). The Magistrate's lack of expertise in laboratory analysis impacted heavily on Kaliardos.

Kaliardos made several attempts to obtain relief in the Court below without success. Kaliardos filed Rule 37 Motions to compel General Motors and BASF to produce documents and laboratory reports dis-

closing the compositions of the accused coatings. The motions were denied.

After an order was entered, Kaliardos filed objections to the Magistrate's order on the grounds that it was based on hearsay statements of an attorney
The Trial Court entered an Order accepting the Magistrate's Order.

In February, 1992, Kaliardos filed a Motion for the appointment of a special master. The Appellees opposed the motion and it was denied.

In April, 1992, Kaliardos terminated a deposition of his expert David W. Byrd (Byrd) which was taken pursuant to an order and moved for a protective order requesting that the Court limit the time and scope of the deposition. Kaliardos' motion for a protective order was denied.

On September 23, 1992, Kaliardos filed a motion for an order requiring Kaliardos and Appellees to conduct joint tests of samples taken from General Motors' vehicles. All of the Appellees opposed the motion and it was denied.

Summary Judgement

On January 30, 1990, General Motors and BASF filed a motion for summary judgement of non-infringement of Kaliardos' patents. On April 30, 1990 after Kaliardos filed his response, General Motors and BASF requested the Trial Court to defer action on the motion pending further discovery.

Over Kaliardos' objections, an order was entered which allowed the Appellees to depose Kaliardos' expert, Mr. Byrd, over a 2 1/2 year period, from December 19, 1989 to July 31, 1992. The transcript of the

deposition consists of 1481 pages in 12 volumes.

During the deposition, the Appellees' attorneys were successful in obtaining a ruling which prohibited Byrd during direct examination from qualifying answers and requiring him to respond to overtly broad questions with "Yes" or "No" answers.

The length of the deposition and the control which was exercised over Byrd's testimony during direct examination made his deposition of limited value. During the Magistrate's oral hearing on the summary judgement motions, Kaliardos made an oral motion to strike Byrd's deposition. The motion was denied.

On September 23, 1993, Magistrate Goldman struck the affidavit of Thurlow Geeck, a person with 44 years of experience in developing and manufacturing

coatings, and Exhibit "H" in Kaliardos' January 3, 1992 response. Mr. Geeck stated in his affidavit that some of Daubert's production records were false. Exhibit "H" was a collection of letters from companies which corrosion tested Kaliardos' coating. The letters referred to specific General Motors standards.

On January 3, 1994, Kaliardos filed motions for leave to file supplements to Kaliardos' responses to the Appellees' pending motions for summary judgement of non-infringement. When the motion was filed, the District Court had not acted on the Appellees' pending motions.

The subject matter of the supplements was a nine page test report of Kaliardos' expert Byrd. The test report supplemented Byrd's affidavits regarding the equivalence of the ingredients of the accused coatings

to the ingredients in the claims of Kaliardos' patents. The test report corroborated Byrd's affidavits. The District Court denied the motion (3/31/94 Order).

Kaliardos requested an oral hearing on his objections to the Magistrate's Report and Recommendation. The request was not granted.

STATEMENT OF FACTS

The Automobile Corrosion Problem

During the 1960's and 1970's vehicle corrosion was a serious problem, particularly in cold weather states. It was estimated in 1975 that rusted-out vehicles cost motorists 5 billion dollars in 1968 and 7.5 billion dollars in 1975.

The Kaliardos Patents

U.S. 3,959,530. The subject of U.S. 3,959,530 is a wax-type protective coating. The coating is described in the

specification in terms of commercially available ingredients.

U.S. 4,356,036 is an improvement of U.S. 3,959,530. The coating is described in the specification in terms of commercially available ingredients. Claim 1 which is representative of the claimed invention is drawn to a mixture of 8 ingredients.

The Accused Coatings

BASF, Daubert and H.B. Fuller supplied General Motors with the accused wax type anti-corrosion coatings. General Motors admits that the coatings met the requirements of General Motors material specifications GM 998-1128 and 998-2150 but denies knowing the exact chemical compositions of the BASF, Daubert and H.B. Fuller coatings.

The chemical compositions of the BASF, Daubert and H.B. Fuiler coatings are dis-

puted issues of fact.

Analyses of coatings taken from six General Motors' vehicles (1983 Cavalier, 1983 Olds Cierra, 1984 Buick Skyhawk, 1987 Celebrity, 1988 Olds Delta and 1991 Pontiac Grand Prix) show that ingredients were used which BASF, Daubert and H.B. Fuller deny useing in their coatings. The 1983 Cavalier, 1984 Olds Cierra and 1984 Buick Skyhawk were examined by an expert who determined that the doors from which the coatings were taken and the coatings themselves were original equipment.

Analyses of a liquid BASF coating and two liquid H.B. Fuller coatings also show that ingredients were used which BASF and H.B. Fuller deny using. The disputed ingredients are material to Kaliardos' claims of infringement.

The requirements of General Motors

two specifications are very similar. GM 998-1128 requires alumunim paste. GM 998-2150 neither requires nor prohibits aluminum paste. General Motors alleges that the aluminum paste was added to make the coating visible. The GM 998-2150 specification requires the coating to be "visible under normal production lighting". This permits a supplier to decide which material to add to meet the visible requirement.

BASF, Daubert and H.B. Fuller supplied the coatings to General Motors under the following designations:

Appellee	GM 998-1128	GM 998-2150
BASF	S51Z001	N.A.
Daubert	NOX-151	NOX-170
H.B. Fuller	N.A.	WC-2251 & WC-2251-P

BASF S51Z001

BASF alleges that, except for minor

changes, BASF and its predecessors sold the same coating to General Motors from 1953 to 1987. In 1987 BASF discontinued making the coating.

The following table compares the compositions of BASF's 1976 and 1985 S51Z001 Safety Data Sheets (MSDS).

1976	1985
1. Aluminum	1. Aluminum
2. Petroleum Hydro-Carbon Resin	2. Hydrocarbon Resin
3. Microscrystalline Wax	3. Microcrystalline Wax
4. VM & Naphtha	4. VM & Naphtha
5. -	5. Stearic Acid
6. -	6. P.P. Methyl Diamine
7. Mineral Spirits	7. Mineral Spirits

Daubert NOX-151 and NOX-170

Daubert admits it sold its X-151

coating to General Motors from 1979 to 1986 and its X-170 from June, 1984 to the present. Daubert used code numbers in its production records to identify the ingredients. After promising in a response to a Rule 34 request to provide samples, Daubert refused to supply Kaliardos with samples.

The compositions of Daubert's coating are disputed issues of fact.

The following table compares Daubert's NOX-151 and NOX-170 Material Safety Data Sheets.

NOX-151	NOX-170
1. Aluminum Pigment	1. Aluminum Pigment
2. Thermoplastic Hydrocarbon Resin	2. Hydrocarbon
3. Microcrystalline Wax	3. Petroleum Wax
4. VM & Naphtha	4. VM & Naphtha

5. Lead Sulfonates	5. Barium Sulfonates
6. Silica	6. Petroleum Oil (Severely solvent refined and/or severaly hydrogenated)

General Motors identified Daubert as the supplier of the coating taken from the 1984 Buick Skyhawk.

H.B. Fuller WC-2291 and WC-2291-P

H.B. Fuller began supplying WC 2291 and WC 2291-P coatings to General Motors on August 19, 1988. H.B. Fuller also used code numbers in its production records to identify the ingredients of its coatings. H.B. Fuller denies making coatings containing the disputed ingredients. Samples of H.B. Fuller coatings were tested by Kaliardos' experts and failed to pass GM 998-2150 corrosion tests.

Fuller's WC-2291 and WC-2291-P MSDS are compared in the following table.

WC-2291	WC-2291-P
1. Aliphatic Hydrocarbon Resin	1. Aliphatic Resin
2. Microcrystalline Wax	2. Microcrystalline Wax
3. Parafinic Wax	3. Parafinic Wax
4. VM & Naphtha	4. VM & Naphtha
5. Calcium Sulfonate	5. Calcium Sulfonate
6. Mineral Spirits	6. Mineral Spirits
7. Aliphatic Oil (Hydro treated)	7. Aliphatic Oil (Severely hydrogenated)

Performance Data

BASF, Daubert and H.B. Fuller have admitted that the coatings which they supplied to General Motors met the requirements of General Motors specifications GM 998-1128 and GM 998-2150. The performance data of Kaliardos' coating

which is disclosed in his '036 patent shows that his coating produces substantially the same results. The performance data in the '036 patent is compared to the requirements of GM 998-1128 and GM 998-2150 in the following chart.

The Magistrate's report and recommendation contains the errors of material facts and conclusions which lack support in the record. The Magistrate failed to believe all of Kaliardos' evidence and to draw all justifiable inferences in Kaliardos' favor. It is clear from the Magistrate's report that he lacked an understanding of chemical laboratory analyses. The Magistrate misinterpreted the meaning of "not detected" in the reports as representing "not present". The Magistrate didn't understand that several methods may have to be employed to

determine an ingredient is present. The District Court was informed of this in the Objections and supplement which Kaliardos filed. Attached to the Objections was a compilation of documents which support Kaliardos' claims of infringement against the Appellees.

COATING PERFORMANCE, KALIARDOS V. GENERAL MOTORS

Requirement	U.S. 4,356,036	GM 998-1128	GM 998-2150
Flash Point	53 °F	53 °F	53 °F
Sprayability	No sag	No sag	No sag
High Temperature Flow Point	up to 200 °F	up to 200 °F	up to 200 °F
Toxicity	None	None	None
Viscosity (Fisher #2 Cup)	12-15 Sec.	12-15 Sec.	12-15 Sec.
Salt Spray	360 Hours	336 Hours	500 Hours
Salt Solution Immersion	7 days	7 days	7 days
Detergent Solution Immersion	7 days	7 days	7 days
Environmental Corrosion Bare Steel	10 cycles	10 cycles	10 cycles
Humidity Resistance	500 Hours	500 Hours	500 Hours
Cold Impact	2.8 joules	2.8 joules	2.8 joules

Appeal to Court of Appeals for the Federal Circuit

Kaliardos appealed the District Court's Granting of Defendant-Appellee's Summary Judgement motion to the Court of Appeals for the Federal Circuit in timely fashion.

The basis for federal jurisdiction in the court of first instance, the United States District Court, Eastern District of Michigan, Southern Division, is as alleged in the District Court case No. 88-CV-73729-DT and is based on 28 U.S.C. 1338(a).

> "(a) The district courts shall have original jurisdiction of any civil action arising under any Act of Congress relating to patents, plant variety protection, copyrights and trademarks. Such jurisdiction shall be exclusive of the courts of the states in patent, plant variety protection and copyright cases."

The Court of Appeals for the Fed-

eral Circuit, disregarded Kaliardos' many showings of genuine issues as to material fact as discussed above which should be tried to a jury. Further, the Court of appeals disregarded Kaliardos' assertions that the court abused its discretion in denying his motion for leave to supplement his summary judgement responses with a test report of his expert and in not granting his request for an oral hearing before deciding the motion for summary judgement.

In essense, the Court of Appeals rubber stamped the holdings of the trial court which rubber stamped the findings of the magistrate judge who at best was confused by the subject matter of the trial by his own admission

tinate [illegible] Court of Ap-

The ultimate acceptance by the Court of appeals of a confused magistrate judge's recommendations leading to the dismissal of plaintiff appellant's case has caused Kaliardos to request a Writ of Certiorari from the Supreme Court in an effort to obtain justice for himself and others who find themselves prevented from seeking justice from a jury of their peers by over-broad application of Rule 56 used to clear the court's docket of difficult cases and/or litigants.

It is time for the Supreme Court to look into this matter and in so doing perhaps give Kaliardos his full day in court, i.e. a trial on the merits of his inventions.

ARGUMENT
RULE 14.1(j)

The District Court's Summary Judgement and the Court of Appeals for the Federal Circuit's affirmation of the judgement must be reviewed and reversed because there are genuine issues for trial.

The issue below is whether Kaliardos has presented sufficient facts to show that there are genuine issues requiring trial; F.R.C.P. 56(e). That issue is here also, along with broader and deeper issues which make the case exceptional and a prime candidate for review by the Supreme Court of the United States. These issues are whether Federal Rule 56 is being properly utilized by the lower courts or is Federal Rule 56 being utilized to rid the federal courts of difficult cases and/or diffi-

cult plaintiffs. Is Federal Rule 56 being utilized by the industrial complex to deprive small independent inventors of the fruits of their labor.

In reviewing Kaliardos' evidence, the Federal Circuit should have accepted all of his evidence as being true, should have drawn justifiable inferences in his favor and not made determinations of credibility. The Federal Circuit has pointed out that patent suits involve complex factual issues requiring the testimonies of experts.

BASF, Daubert and H.B. Fuller admitted they supplied the accused coatings and General Motors has admitted that it used the coatings in its vehicle doors. Therefore, the only matter to be decided is whether Kaliardos has presented sufficient facts requiring a trial on his claims of infringement.

Kaliardos has provided detailed claim analyses. His evidence shows that the coatings covered by his patents meet the requirements of General Motors specification 998-1128 and 998-2150. BASF, Daubert and H.B. Fuller admit that their coatings also meet the requirements of the General Motors standards. Therefore, Kaliardos' coatings produced the same results as the Appellee's coatings.

Kaliardos' affidavits show that his coatings were developed to meet General Motors specifications. The Appellees have admitted that their coatings were developed for this purpose. Kaliardos' affidavits show which ingredients are needed to meet the requirements of the specification.

Under the guidelines, the Federal Circuit should have accepted this evi-

dence as being true. By the court's own statement, the doctrine of equivalents is not a prisoner of a formula. In determining equivalence, all of the evidence must be considered, including the purposes of elements and whether a person skilled in the art would consider elements to be interchangeable.

Kaliardos' responses include detailed claim analyses which support his claims of infringement against the Appellees. His responses are supported by the affidavits of Kaliardos and experts and documents.

The District Court abused its discretion in denying Kaliardos' motion for leave to supplement his responses with the test report of his expert, Byrd. Mr. Byrd's test report was relevant evidence which would have been admissable at the

time of trial. Although affidavits are the most common evidence in opposition to motions for summary judgement, there is no reason to exclude evidence which would be admissable during a trial. Rule 702 F.R.Ev. was enacted to assist the trier of fact to understand the evidence and determine a fact in issue. "Nothing in the text of this rule establishes 'general acceptance' as an absolute prerequisite to admissability."; Daubert v. Merrell Dow Pharmaceuticals Inc., 27 USPQ2d 1200, (S.Ct. 1993). Byrd's affidavits clearly showed that he was competent to perform the tests.

The District Court abused its discretion in not granting Kaliardos' request for an oral hearing. During the 5 1/2 years in the District Court, only two oral hearings were held in the District Court. The District Court acted

on the record without the benefit of expert testimony; Yenzer v Agrotors Inc., 22 USPQ2d 1291 (D.C. M.D. Pa. 1991). An oral hearing after the Magistrate's Report and Recommendation would have permitted Kaliardos the opportunity to explain the evidence which the Magistrate misconstrued as being "muddled and difficult to comprehend" before the District Court acted on the motions for summary judgement.

THE DISTRICT COURT ABUSED ITS DISCRETION IN ADOPTING THE MAGISTRATE'S RECOMMENDATION

The Federal Circuit has made it clear that in reviewing a grant of summary judgement of a district court, the Federal Circuit is not bound by the holding of a district court that no material facts are in dispute, and must make an independent determination as to whether the standards for summary judgement have

been met. Vas-Cath Inc. v Mahurkar, 19 USPQ2d 1111 (Fed. Cir. 1991); C.R. Bard, Inc. v. Advanced Cardiovascular Systems, 911 F2d 670, 673, 15 USPQ2d 1540, 1542-43 (Fed. Cir. 1990).

The protracted proceedings in the District Court created a difficult record for the District Court. The long period for filing dispositive motions and the 2 1/2 year deposition of the Kaliardos expert permitted the Appellees' skilled attorneys to confuse the District Court by their attacks on Kaliardos' evidence.

The guidelines for de novo review would have enabled the District Court to decide whether summary judgement is appropriate. The main issue on this appeal is whether there are disputed issues of material facts which would preclude the granting of the Appellees' motions for

summary judgement.

After Kaliardos filed his objections to the Magistrate's Report and Recommendation, under Section 72(b) of the Federal Rules of Civil Procedure, the District Court was required to conduct a de novo review of the evidence. The Supreme Court has said that although Section 636(b) of the Federal Magistrate's Act was enacted to "establish a system capable of increasing the overall efficiency of the Federal judiciary...Congress also intended the district judge to retain ultimate responsibility for decision making."; Mathews v Weber, 423 U.S. 261, 96 S.Ct. 549 (1976).

The evidence showed that there were genuine issues for trial. By accepting the Magistrate's Report and Recommendation, the District Court abused its discretion.

In deciding a motion for summary judgement "credibility determinations, the weighing of evidence, and the drawing of inferences from the facts are jury functions, not those of a judge, whether he is ruling on a motion for summary judgement or for a directed verdict. The evidence of the non-movant is to be believed, and all justifiable inferences are to be drawn in his favor." Anderson v. Liberty Lobby, Inc. et al., 477 US 242, 106 S.Ct. 2505 (1986); Lemelson v. TRW Inc., 760 F2d 1254, 1260. 225 USPQ 697, 700 (Fed. Cir. 1985); Connell v. Sears, Roebuck & Co., 722 F2d 1542, 1546, 220 USPQ 193, 197 (Fed. Cir. 1983); a court may not resolve "disputed and relevant factual issues on conflicting affidavits of qualified experts, (citations omitted). Nor is it at liberty to disbelieve the good faith statements of

experts contained in depositions or affidavits and presented by the non-moving party." (citations omitted). Federal Laboratories, Inc. v. Barringer Research Limited et al., 696 F2d 271; 217 USPQ 114 (Fed. Cir. 1982); "Although Federal Rules of Civil Procedure do not limit or forbid use of summary judgement procedures in patent cases, courts should exercise great caution before granting such motion in infringement action; patent cases in particular tend to involve complex issues that are not properly resolved without aid of expert testimony."; Landau v. J.D. Barter Construction Company, Inc. 657 F2d 158, 211 USPQ 861 (7th Cir. 1981).

The summary judgement motions of General Motors required Kaliardos "to set forth specific facts showing that there is a genuine issue for trial"; F.R.C.P. 56(e). Kaliardos claimed that the Appel-

lees were liable jointly and severally for infringing his patents.

The District Court abused its discretion in denying Kaliardos' motion for leave to supplement his responses on the ground it was not supported by an affidavit. The subject of the motion was a test report by Kaliardos' expert which supported Kaliardos' evidence of equivalence.

Although Fed.R.Civ.P. 56(e) requires supporting affidavits to be made on personal knowledge, the Rule does not restrict evidence of the non-movant to affidavits. Moreover, "While it is clear that a summary judgement may be rendered solely on the basis of affidavits, affidavits are, as a general proposition, the least trustworthy basis, since the affiant has not been subject to cross examination and his demeanor is not observable."

Moore's 1992 Federal Rules Pamphlet, Part 1, pg. 56.

Because there are Genuine Issues of Material Facts, the Judgement of the District Court Should Be Reversed

An infringement of a patent is an infringement of its claims. "Claims measure the invention and determine whether there is infringement."; Continental Paper Bag Co. v. Eastern Paper Bag Co., 210 US 405 (1908). "Each claim of a patent is a separate and distinct invention." Gould, Inc. v United States, 195 USPQ 112, (US Ct Cls, 1977). Proof of infringement of a single claim is sufficient to establish infringement of the patent.

Claims may be infringed in one of two ways. If, by comparing the words of a claim with an accused device, it is shown that the accused device is clearly within the claim, a case of literal infringement

exists. Acme Highway Products Corp. v D.S. Brown Co., 177 USPQ 130 (6th Cir. 1973).

The second test is the application of the doctrine of equivalents. "A finding of equivalence is a determination of fact. Proof can be made in any form: through the testimony of experts or others versed in the technology; by documents, including texts and treatises; and of course, by the disclosure of the prior art. Like any other issue of fact final determination requires a balancing of credibility, persuasiveness and weight of evidence." Intel Corp. v. International Trade Commission, 20 USPQ 2d 1161 (Fed. Cir. 1161).

"What constitutes equivalency must be determined against the context of the patent, the prior art, and the particular circumstances of the case."

Graver Tank & Mfg. Co., Inc., et al. v. Linde Air Products Co., 339 U.S. 605; 85 USPQ 328 (1950).

"Equivalence, in the patent law, is not the prisoner of a formula and is not an absolute to be considered in a vacuum ...It does not require complete identity for every purpose and in every respect... Consideration must be given to the purpose for which an ingredient is used in a patent, the qualities it has when combined with the other ingredients, and the function which it is intended to perform. An important factor is whether persons reasonably skilled in the art would have known of the interchangeability of an ingredient not contained in the patent with one that was." Graver Tank, supra.

Under §271(b) of the Patent Statute, a party may be liable as a contributory

infringer if the party sells a material component of a patented invention with knowledge that such component has been made for use in an infringement of the invention.

BASF

Kaliardos' January 3, 1992, response to the joint General Motors and BASF motion for summary judgement sets forth specific facts showing there is a genuine issue for trial on Kaliardos' claim of infringement against BASF. The response is supported by affidavits of Kaliardos and his expert Byrd. Byrd's affidavit is supported by test data, documents, technical articles, and the basis of his finding of equivalence between the ingredients of the BASF coating and the ingredients of claim 1 of the patents. Kaliardos' affidavit identifies the purposes

of the ingredients of the claims. The January, 1992 response is supported by the October, 1992 supplement and the '036 patent which shows that Kaliardos' coating produces the same results as the BASF coating. Kaliardos' claim of infringement is further supported by the deposition testimony of Byrd.

the January, 1-94 test report which the District Court refused to admit and the affidavits of Daryl Strandberg, Dr. Paul Epstein, Dr. James Johnson and Dr. Peter Warner.

Daubert

Kaliardos' December 20, 1991 response to the Daubert motion for summary judgement and Daubert's acts provide specific facts showing there are genuine issues for trial on Kaliardos' claim of infringement against Daubert. The res-

ponse is supported by affidavits of Kaliardos and his expert Byrd. The mistake of the lab technician which resulted in a Pontiac Grand Prix door to be incorrectly identified in the December, 1991 response as a Cadillac Eldorado door does not invalidate the lab analysis of the coating which was taken from the interior of the door. Kaliardos' response and supplement of October, 1992 are supported by exhibits and affidavits, Kaliardos' disclosures in affidavits of the purpose of the ingredients of his coatings, and deposition testimony of Byrd.

Daubert's failure to come forward with evidence to rebut the presumptions of infringement resulting from its refusal to supply samples of its coatings, its opposition to the appointment of a

Special Master, its opposition to joint tests of coatings and its opposition to have Kaliardos take the deposition of its employees provide further evidence of infringement. Kaliardos' evidence is supplemented by the deposition testimony of Byrd and the January, 1994 test report which the District Court refused to admit.

H.B. Fuller

Kaliardos' January 3, 1992, response to the H.B. Fuller motion for summary judgement and H.B. Fuller's acts provide specific facts showing there is a genuine issue for trial on Kaliardos' claim of infringement against H.B. Fuller. The response is supported by affidavits of Kaliardos and his expert Byrd and the October, 1992 supplement. The failures of the H.B.

Fuller coatings to meet the corrosion test requirements of General Motors 998-2150 raises a presumption that H.B. Fuller has withheld evidence tending to prove infringement. The deposition testimony of Byrd

and the January, 1994 test report which the District Court refused to admit supplies further evidence to support Kaliardos' claim of infringement.

H.B. Fuller's opposition to the appointment of a Special Master, its opposition to joint tests of coatings raise presumptions of infringement.

General Motors

General Motors' failure to come forward with evidence to rebut the presumptions caused by its opposition to the appointment of a Special Master and its opposition to joint tests of coatings

in its vehicles raises a presumption of infringement.

There is an issue of material fact as to which of Appellees added the disputed ingredients to the coating. The deposition testimony of Byrd that there was a statement with the BASF coating which says that "Mr. Ethington sampled this from a production line. That's all I recall.", raises a presumption that General Motors added the disputed ingredients.

This would make General Motors liable as a direct infringer under 35 U.S.C. §271(a) and expose the other Appellees to liability as contributory infringers under 35 U.S.C. §271(c). General Motors could also be found liable under 35 U.S.C. §271(b) as an infringer by inducement.

The District Court Abused Its Discretion In Not Granting Kaliardos' Request for an Oral Hearing

During the 5 and 1/2 years of the pre-trial, there were only two oral hearings before Judge Gadola. The issues in this case were complex. Kaliardos had filed objections which identified numerous problems with the Magistrate's report.

Three motions of Kaliardos were pending. Two of the motions were Rule 11 motions. Kaliardos requested that the Court defer acting on the summary judgement motions until it ruled on Kaliardos' Rule 11 motions. The Rule 11 motions were direct attacks on the credibility of the Appellees. A resolution of the Rule 11 motions may have affected the pending summary judgement motions.

Kaliardos had waited five years in

the District Court to bring his case before a jury. The extension of time to file dispositive motions, which he opposed, substantially delayed the litigation and burdened him financially.

Although some appeal courts have upheld refusals of trial courts to grant oral hearings, where issues have been complex, failures to grant oral hearings have been found to be unacceptable.

In Kistner v. Califano (CA6 Ohio) the appeals courts vacated a summary judgement where local rules allowed for elimination of oral hearings. In Dredge Corp. v. Penny, 338 F2d 456 (CA9 1964) the Court said that Rule 56 appears to contemplate that a hearing will be held before a motion for summary judgement is acted on.

Summary and Conclusion

Thus, Kaliardos provided ample evidence to the Magistrate Judge, the District Court and the Court of Appeals to establish his absolute right to a jury trial. Genuine issues of material fact with respect to each of the defendant-appellees below have been discussed above.

The fact that a Magistrate Judge, not knowledgable in the highly technical subject matter has been confused and lead astray by Defendant-Appellees Respondant's council and wrongly recommended granting of their summary motions high lights the danger in the over zeleous use of Rule 56 motions, especially in complex patent cases by the lower federal courts in recent years.

The acceptance of the Magistrate's

recommendation by the Trial Court without the aid of a master and the affirmance of the trial court's decision to dismiss Kaliardos' case by the Court of Appeals in view of the evidence discussed above and the plain requirements of Rule 56 certainly gives rise to the question; Is Rule 56 being used to clean the Federal Court system of difficult cases and/or litigants not all of who have the finances and tenacity to bring the question to this court.

This question is ripe for consideration. This case is an excellent vehicle for such consideration. The struggling independant inventors faced with extremely difficult litigation against corporate america require this court's help in such consideration.

The granting of the requested Writ of Certiorari is therefore prayed for.

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

NICOLAS KALIARDOS,

Plaintiff,

v.

GENERAL MOTORS CORPORATION, BASF CORPORATION, DAUBERT INDUSTRIES, INC., H.B. FULLER COMPANY, and H.B. FULLER AUTOMOTIVE PRODUCT, INC., jointly and severally,

Defendants.

_____/

Civil Action No. 88-73729

HONORABLE PAUL V. GADOLA
U.S. DISTRICT JUDGE

ORDER ACCEPTING MAGISTRATE JUDGE'S OCTOBER 7, 1993 REPORT AND RECOMMENDATION

The court, pursuant to 28 U.S.C. §636(b)(1)(B), Fed. R. Civ. P. 72(b), and LR 72.1(d)(2) (E.D. Mich. Jan. 1, 1992), has reviewed the magistrate judge's October 7, 1993 report and recommendation as well as plaintiff's objections. After conducting a de novo

review, the court accepts the magistrate judge's report and recommendation as the court's findings and conclusions.

Therefore, it is hereby ORDERED that the magistrate judge's October 7, 1993 report and recommendation is ADOPTED.

It is further ordered that the motion for summary judgement of defendants General Motors Corporation and BASF Corporation is GRANTED.

It is further ORDERED that defendant Daubert Industries, Inc.' motion for summary judgement is granted.

It is further ORDERED that the motion for summary judgement of defendants H.B. Fuller and H.B. Fuller Automotive Products, Inc. is GRANTED;

a judgement in accordance with this order shall be entered.

SO ORDERED.

Dated: 3/30/94

(signed)
PAUL V. GADOLA
UNITED STATES DISTRICT
JUDGE

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

NICOLAS KALIARDOS,

Plaintiff,

vs.

GENERAL MOTORS CORPORATION, BASF CORPORATION, DAUBERT INDUSTRIES, INC., H.B. FULLER COMPANY, NATIONAL STARCH & CHEMICAL CORPORATION, and BEAZER EAST, INC., jointly and severally,

Defendants.
_____/

Civil Action
Case No.
88-CV-73729-DT

Hon. Paul J.
Gadola

AFFIDAVIT OF DAVID W. BYRD

State of Michigan)
) SS:
COUNTY OF OAKLAND)

David W. Byrd, being duly sworn, deposes and says:

1. That I have an M.S. degree in Biological Science, Wayne State University, post graduate credits in chemistry, and am a member in good standing of The

American Chemical Society, ANACHEM and the Chromatography Society.

2. That I am the owner of Absolute Analytical Laboratory, 1030-D Crooks Road, Clawson, Michigan, which is in the business of trace organic and inorganic chemical analyses of materials.

3. That from December, 1987 to the present, I conducted laboratory analyses at the Absolute Analytical Laboratory of samples of a BASF anti-corrosion coating and scrapings of this coating taken from General Motors' vehicles.

4. That I reviewed BASF and General Motors documents, technical literature and deposition testimonies of BASF and General Motors employees relating to the BASF S51Z001 coating.

5. That I also reviewed U.S. Patents Nos. 3,959,530 and 4,356,036, including the specifications and claims.

6. That after reviewing the above information, it is my opinion that the BASF anti-corrosion coating contains all of the ingredients or well known equivalents of the ingredients specified in claim 1 of U.S. Patent No. 3,959,530 and claim 1 of U.S. Patent No. 4,356,036.

Further deponent sayeth not.

David W. Byrd

Subscribed and sworn to
before me this 2nd
day of January, 1992

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

94-1265

NICOLAS KALIARDOS,

Plaintiff-Appellant,

v.

GENERAL MOTORS CORPORATION, BASF CORPORATION, H.B. FULLER COMPANY, and H.B. FULLER AUTOMOTIVE PRODUCTS, INC., jointly and severally,

Defendants-Appellees,

and

DAUBERT INDUSTRIES, INC.,

Defendant-Appellee.

DECIDED: November 22, 1994

Before LOURIE, Circuit Judge, COWEN, Senior Circuit Judge, and CLEVENGER, Circuit Judge.

LOURIE, Circuit Judge.

DECISION

Nicolas Kaliardos appeals from a decision of the United States District Court for the Eastern District of Michi-

gan granting summary judgement of non-infringement in favor of General Motors Corporation, BASF Corporation, H.B. Fuller Company, H.B. Fuller Automotive Products, Incorporated, and Daubert Industries, Incorporated. Kaliardos v. General Motors Corp., Civ. No. 88-73729 (E.D. Mich. Mar. 30, 1994). Because we conclude there is no genuine issue as to any material fact and the defendants are entitled to judgement as a matter of law, we affirm.

DISCUSSION

On September 14, 1988, Kaliardos filed an action claiming infringement of certain claims of United States Patents 3,959,530 and 4,356,036 by General Motors and three of its suppliers of anti-corrosive automobile coatings. Kaliardos claimed that the defendants infringed the '530 patent under the doctrine of equivalents, and infringed the '036 patent

literally and under the doctrine of equivalents.* In 1991, after lengthy discovery, the defendants filed motions for summary judgement of non-infringement.

On October 7, 1993, the magistrate judge reported that the evidence produced did not create a genuine issue of material fact concerning whether the accused products infringed the asserted claims, either literally or under the doctrine of equivalents. Accordingly, the magistrate judge recommended entry of summary judge-

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* Kaliardos alleged that BASF literally infringed claims 1, 2, and 7 of the '036 patent, and infringed claims 1-6 of the '036 patent and claims 1 and 2 of the '530 patent under the doctrine of equivalents; that Daubert literally infringed claims 1, 5, and 6 of the '036 patent, and infringed claims 1-6 of the '036 patent and claims 1 and 2 of the '530 patent under the doctrine of equivalents; and that Fuller infringed claims 1 and 2 of the '530 patent under the doctrine of equivalents. Kaliardos aslo asserted claims against General Motors.

ment in favor of the defendants. The district court judge adopted the report and recommendation of the magistrate, granted the defendants' motions for summary judgement, and dismissed Kaliardos' action on the merits. Kaliardos now appeals.

Summary judgement is appropriate if there is no genuine issue as to any material fact and the moving party is entitled to a judgement as a matter of law. Fed. R. Civ. P. 56(c). If a party fails to make a showing sufficient to establish the existence of an element essential to that party's case, summary judgement should be granted against that party. Celotex Corp. v. Catrett, 477 U.S. 317, 322 (1986). The burden is initially on the moving party to show that there is an absence of evidence to support the non-moving party's case. Id. at

323. The burden then shifts to the non-moving party to designate specific facts showing that there is a genuine issue for trial. Id. at 324. In reviewing a grant of summary judgement, we must make an independent determination as to whether the standards for summary judgement have been met. C.R. Bard, Inc. v. Advanced Cardiovascular Sts., 911 F.2d 670, 673, 15 USPQ2d 1540, 1542-43 (Fed. Cir. 1990).

Claim 1 of each patent is representative of the claims asserted against the defendants. Claim 1 of the '530 patent reads:

> A cleaning and protective coating composition consisting essentially of a mixture of wax residue such as paraffin and microcrystalline wax, perchlorethylene (sic), petroleum distillate having a boiling point ranging between 350 (degrees) and 380 (degrees) F., and a nonionic surfactant such as nonylphenoxpoly (ethyleneoxy) ethanol and a small amount of (N,N,N',N'-tetrakis (2-hydroxypropyl) ethylenediamine)).

Claim 1 of the '036 patent reads:

> An anti-corrosion coating comprising a mixture of aluminum paste or zinc paste containing aluminum or zinc flakes and a solvent, microcrystalline wax, aromatic hydrocarbon resin having a softening point, R and B, of 70 (degrees) C. - 140 (degrees) C., chlorinated rubber having a combined chlorine content of at least 66%, neutral barium sulfonate, chlorinated solvent, aromatic hydrocarbon solvent and mineral spirits.

Kaliardos asserts that the court erred in granting summary judgement because he presented sufficient evidence to show there are genuine issues requiring trial. However, the evidence adduced does not establish that each of the elements of the asserted claims is present in the accused coatings. For example, the evidence does not show the presence of neutral barium sulfonate in the BASF coatings or the presence of chlorinated solvent or chlorinated rubber in the Daubert coatings. Furthermore, there is

a lack of evidence that the accused coatings infringe the patents under the function-way-result test of the doctrine of equivalents. Moreover, there were inadequate assertions of the presence of equivalents of neutral barium sulfonate, a nonionic surfactant such as nonylphenoxypoly (ethyleneoxy) ethanol, and the specific ethylenediamine required by the claims. We thus agree that there were no genuine issues of material fact concerning infringement and that the court did not err in granting summary judgement of non-infringement.

Kaliardos also asserts that the court abused its discretion in denying his motion for leave to supplement his responses with a test report of his expert. The court denied Kaliardos' motion on the basis that the report was untimely and unverified. Kaliardos has

not established that the court abused its discretion in not admitting the test report in question.

Furthermore, Kaliardos asserts that the court abused its discretion in not granting his request for an oral hearing before deciding the motion for summary judgement. However, the court properly relied on the record developed by the magistrate and was not required to conduct an oral hearing in addition to that conducted by the magistrate.

Finally, the defendants each request an award of attorney fees and costs against Kaliardos. We decline to award fees and costs in this case because we believe the appeal was undertaken conscientiously.

United States Patent [19]

Kaliardos [11] **3,959,530**

[45] **May 25, 1976**

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[54] **CLEANING AND PROTECTIVE COATING COMPOSITION AND METHOD**

[76] Inventor: **Nicolas Kaliardos**, 10725 Morang Ave., Detroit, Mich. 48224

[22] Filed: **Sept. 20, 1974**

[21] Appl. No.: **507,851**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 319,851, Dec. 29, 1972, abandoned.

[52] **U.S. Cl.** **427/341**; 106/3; 106/4; 106/5; 106/6; 106/7; 106/8; 106/9; 106/10; 106/11; 427/154; 427/155; 427/156

[51] **Int. Cl.²** **B05D 3/10**; C09G 1/08

[58] **Field of Search** 106/3–11; 117/62, 168; 427/154–156, 341

[56] **References Cited**

UNITED STATES PATENTS

2,884,329	4/1959	Jezl	106/10
3,365,312	1/1968	Nowack	106/3
3,582,366	6/1971	Brieger	106/10

OTHER PUBLICATIONS

Chemical Dictionary, 1961, p. 465.

Chemical Abstract, 66: 19.976g.

Primary Examiner—Ronald H. Smith
Assistant Examiner—Janyce A. Bell
Attorney, Agent, or Firm—Barnes, Kisselle, Raisch & Choate

[57] ABSTRACT

A waxing and protective coating composition embodying the invention comprises a mixture of wax residue such as paraffin and microcrystalline wax, chlorinated solvent, petroleum distillate, and a nonionic surfactant such as nonylphenoxypoly-(ethyleneoxy)ethanol and a small amount of [N,N,N',N'-tetrakis (2-hydroxypropyl)ethylenediamine].

6 Claims, No Drawings

CLEANING AND PROTECTIVE COATING COMPOSITION AND METHOD

This patent application is a continuation-in-part of my application Ser. No. 319,851, filed Dec. 29, 1972, now abandoned.

This invention relates to cleaning and protective coating compositions and to a method for protecting the finishes of articles and particularly the finishes of automobiles.

BACKGROUND OF THE INVENTION

In protecting the finishes of articles such as paint finishes, chrome plating, glass, and the like, it is common to utilize separate cleaning and waxing compositions. Such separate compositions require individual steps of application, removal and buffing or smoothing.

Among the objects of the present invention are to provide a composition for cleaning and protectively coating finishes such as those of automobiles and a method of applying such composition which requires a minimum of labor, which has rust inhibiting properties; which obviates the need for extensive rubbing or buffing; which protects the surface for a long period of time against atmospheric conditions; and which minimizes the cost of both the composition and labor involved.

DESCRIPTION

Basically, the waxing and protective coating composition embodying the invention comprises a mixture of wax residue such as paraffin and microcrystalline wax, chlorinated solvent, petroleum distillate, and a nonionic surfactant such as nonylphenoxypoly(ethyleneoxy)ethanol and a small amount of [N,N,N',N'-tetrakis(2-hydroxypropyl) ethylenediamine].

The wax residue is preferably a mixture of paraffin and microcrystalline waxes. The terms paraffin wax and microcrystalline wax are well understood in the wax art. A typical paraffin wax is of the type made by Shell Chemical Company and sold under the trademark SHELLWAX 100 having the following properties:

	ASTM Test Method	100
Melt Point, °F	D-87	125
Color, Saybolt	D-156	+30
Flash Point, C.O.C., °F	D-92	405
Penetration, Needle	D-1321	
at 77°F		13
at 100°F		70
at 110°F		90
Oil Content, % Wt.	D-721	0.1
Tensile Strength, p.s.i. at 73°F	D-1320	275
Gradient Block Pt., (Pick/Block) °F	D-1465	93/94
Refractive Index at 100°C	D-1747	1.4180
Lbs./Gal. at 60°F		7.59
at 210°F		6.29

Another type of paraffin wax which has been used successfully is made by Mobile Oil Corporation and sold under the designation 133/135 having the following properties:

FULLY REFINED WAXES	133/135 AMP
Color, Saybolt	+30
Viscosity at 210°F, SUS	39

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FULLY REFINED WAXES	133/135 AMP
Melting Point, °F ASTM	131
Blocking Point, °F	101
Flash Point, °F COC	430
Tensile Strength (T.O.)psi	330
Oil Content, % by Wt.	0.2
Lbs/Gal at 160°F (Liquid)	6.41
Lbs/Gal at 60°F (Solid)	7.62

A typical microcrystalline wax is sold by Shell Chemical Company under the trademark SHELLMAX 500 and has the following properties:

	ASTM Test Method	500
Melt Point, °F	D-127	141
Color, ASTM	D-1500	Lt.2.0
Flash Point, C.O.C., °F	D-92	565
Penetration, Needle	D-1321	
at 77°F		21
at 100°F		52
at 110°F		125
Oil Content, % Wt.	D-721	0.9
Refractive Index at 100°C	D-1747	1.4440
Lbs./Gal.		
at 60°F		7.75
at 210°F		6.67

Another microcrystalline wax that has given satisfactory results is made by Mobile Oil Corporation and sold under the trademarks Mobilwax 2305 and Mobilwax 2305 BR having the following properties:

	Mobilwax 2305	Mobilwax 2305 BR
Melting Point, °F (ASTM-127)	176	176
Color, ASTM	2	2.5
Viscosity at 210°F, SUS	86	160
Needle Penetration at 77°F	27	27
at 108°F	95	95
at 115°F	130	130
Oil Content, %	4.0	4.0
Flash Point, °F (COC)	540	540
Wgt./Gal.lbs at 180°F	6.71	6.71
Wgt./Gal.lbs at 60°F	7.74	7.74

Chlorinated Solvent may comprise any one of the number of well-known solvents such as perchloroethylene.

A typical perchloroethylene is such as sold by The Dow Chemical Company under the designation "Special Vapor Degreasing Grade" having the following specifications and properties:

SPECIFICATION*	
Appearance	Clear, free of sediment and suspended matter
Color APHA, Maximum	15
Distillation Range, at 760, IBP-DP	118–122°C
Water Content, Maximum	
Karl Fischer Method, ppm	30 ppm
Non Volatile Matter, Maximum	25 ppm
Free Halogens, Maximum	none
Acidity (as HCl) Maximum	none
Alkalinity (as NaOH) Maximum	30 ppm
Specific Gravity at 25/25°C	1.614–1.622
Acid Acceptance (as NaOH)	
by Titration	0.149–0.176
By Calculation	0.156–0.190
Stability with Copper	Passes test

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PROPERTIES	
Freezing Point	−9°F(−23°C)
Pounds per gallon at 25°C	13.47
Refractive index at 25°C	1.503
Viscosity at 25°C, centipoises	0.84
Flash Point	none
Fire Point	none
Heat of vaporization at b.p.:	
Cal./g	50.1
BTU/lb.	90.2
Specific Heat, cal./g°C	0.21
*Dow Method of Analysis 59015	

The petroleum distillate may be one of the various types preferably having a boiling point ranging from 350° to 380°F.

A typical petroleum distillate is generally known in the trade as Solvent 140. For example, such a solvent is sold by Shell Chemical Company under the designation Shell Sol 140 having the following properties:

PROPERTY	TEST METHOD	Shell Sol 140
Specific Gravity at 60°F	ASTM D-1250	0.786
Gravity, °API	ASTM D-287	48.5
Pounds per Gallon at 60°F	ASTM D-1250	6.55
Color, Saybolt	ASTM D-156	+30
Kauri-Butanol Number	ASTM D-1133	31
Aniline Point, °F	ASTM D-611/D1012	155
Mixed Aniline Point °F	ASTM D-611/D-1012	—
Flash Point, T.C.C., °F	ASTM D-56	141
Distillation, °F	ASTM D-86	
IBP		370
10% Recovered		371
30%		372
50%		373
70%		375
90%		378
Dry Point		—
End Point		408
Evaporation Rate, Seconds	Shell Evapo-Rater	
10%		1050
30%		3230
50%		5470
70%		7830
90%		10400
100%		13700
Composition, % Volume		
Paraffins		48.4
Naphthenes		47.7
Aromatics(total)		3.9
Toluene plus Ethyl Benzene		0.0
C_9 plus Aromatics excluding EB		3.9

A similar solvent is sold by Grow Solvent Company, Inc., under the designation Solvent GS 140 and has the following properties:

A.S.T.M. DISTILLATION:		
I.B.P.	363°F	183.0°C
5%	366	185.6
10%	367	186.1
20%	368	186.7
30%	369	187.2
40%	370	187.8
50%	371	188.3
60%	372	188.9
70%	373	189.4
80%	374	190.0
90%	376	191.1
95%	379	192.8
Dry Point	383	195.0
A.P.I. Gravity at 60°F		51.2°
Specific Gravity at 60/60°F		0.7745
Weight Per Gallon at 60°F		6.448
Straight Aniline Point		67.8°C
**Kauri Butanol Value		29.4 cc
Tag Closed Cup Flash Point		143°F

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-continued

Copper Strip Corrosion	Very Slight Tarnish
**Corrected to Toluol at 105.0 cc	

Nonylphenoxypoly(ethyleneoxy)ethanol is commercially available under the trademark "IGERPAL" made by GAF Corporation. [N,N,N''-tetrakis (2-hydroxypropyl) ethylenediamine] is made commercially under the trademark "QUADROL" by Wyandotte Chemicals Corporation, Wyandotte, Michigan.

A preferred composition by weight for the cleaning and waxing composition comprises:

Table I

Wax Content	
Parrafin	3.0%
Microcrystaline	2.0%
Chlorinated Solvent	5.0%
Petroleum Distillate	88.0%
Igerpal (Surfactant)	1.0%
Quadrol (Chelating Agent)	1.0%

Although this composition is preferred, successful results have been obtained with the following range of compositions by weight:

Table II

Wax Content			
Paraffin	10%	10%	3
Microcrystalline	10%	10%	3
Chlorinated Solvent	38%	38%	5
Petroleum Distillate	40%	40%	87
Igerpal (Surfactant)	1%	1%	1
Quadrol (Chelating Agent)	1%	1%	1
	100	100	100

In addition, I have found that the addition of about 1 percent butyl cellusolve facilitates spreadability and rust inhibition.

In accordance with the invention, the cleaning and waxing composition is made by mixing the materials at

room temperature without the addition of heat, thereby minimizing the labor involved. The resultant composition is clear in color.

In the preferred method of manufacture, the following steps are utilized to mix the composition:

1. Heat Petroleum Distillate to 110°F
2. Add Chlorinated Solvent
3. Heat waxes to melting point and add to solvents
4. Add Igerpal with stirring
5. Add Quadrol with stirring

The aforementioned compositions provide a liquid. A paste wax composition may comprise the following compositions by weight:

Table III

Wax Content			
Paraffin	10%	30%	—
Microcrystalline	50%	30%	60%
Chlorinated Solvent	2%	2%	2%
Petroleum Distillate	36%	36%	36%
Igerpal (Surfactant)	1%	1%	1%
Quadrol (Chelating Agent)	1%	1%	1%
	100	100	100

Improved gloss is obtained by adding hexogen octoate driers and ethylene glycol n-butyl ether.

Hexogen octoate driers are essentially an odorless solution of metallic salts of 2-ethyl hexoic acid in Rule 66 mineral spirits.

PHYSICAL PROPERTIES

Product	Color Maximum Gardner	Specific Gravity Range (75°F)	G.H. Viscosity Maximum (77°F)	Pounds/ Gallon (75°F)
Lead 24%	3	1.080–1.110	A	9.00–9.25
Cobalt 12%	Purple	1.035–1.065	J	8.12–8.87
Cobalt 6%	Purple	0.860– .885	A	7.16–7.37
Manganese 6%	Brown	0.875– .920	A	7.29–7.66
Calcium 5%	4	0.890– .940	A	7.41–7.83
Calcium 4%	3	0.860– .884	A	7.16–7.36
Iron 6%	Brown	0.890– .930	A	7.41–7.75
Zinc 8%	2	0.870– .895	A	7.25–7.45
Rare Earth 6%	5	0.850– .880	E	7.10–7.30

A typical ethylene glycol n-butyl ether is sold by The Dow Chemical Company under the designation DOWANOL EB having the following properties:

	Dowanol EB
Molecular Weight	118.2
Boiling Point(mm.Hg. °C)	
760	171.1
10	61.7
Vapor Pressure at 25°C(mm.Hg.)	0.88
Pour Point °F	−103'
Specific Gravity at 25/25°C	0.900
Pounds/Gallon at 25°C	7.49
Viscosity (centistokes) at	
25°C	3.15
60°C	1.51
Flash Point °F (Open Cup)	165
Fire Point °F (Cleveland) (Open Cup)	165
Specific Heat(cal./g./°C) at 25°C	0.56
Surface Tension (Dynes/Cm.)	
25°C	27.4
75°C	23.3
Heat of Vaporization (cal./g.) at 760 mm. Hg.	88.4
Thermal Conductivity k × 10^4 (cal./cm.^{3}/sec./°C/cm) at 60°C	3.55

Typical compositions by weight are as follows:

Table IV

Wax Content	6
Paraffin	0.5
Microcrystalline	4.5
Chlorinated Solvent	2
Petroleum Distillate	89
Igerpal (Surfactant)	1
Quadrol (Chelating Agent)	1
Cobalt Drier	1
Dowanol EB	1
	100

Table IV-continued

Paraffin	0.5	2	1
Microcrystalline	4.5	3	4
Chlorinated Solvent	2	—	—
Petroleum Distillate	89	92	91
Igerpal (Surfactant)	1	1	1
Quadrol (Chelating Agent)	1	1	1
Cobalt Drier	1	1	1
Dowanol EB	1	—	1
	100	100	100

In making the composition set forth in Table IV, the procedure is the same as followed with respect to the compositions of Table I and the additional components are added as the last additions.

When made in accordance with the ranges of percentages heretofore set above, it is in the form of an easily spreadable composition which can be applied by hand or otherwise to the surface being treated. The process of application as by a small cotton cloth removes the dirt.

In accordance with the invention, the resultant applied coating is then rinsed with water which functions to set the coating and produce a long-lasting finish.

In accordance with the invention, the following steps are used in applying the composition:

1. The surface is rinsed to remove grit and loose dirt. Improved results are acquired when the surfaces are dry.

2. The composition is applied uniformly by hand or otherwise to the surface being treated. Light pressure is preferably utilized in order to remove loose grit, grime, grease and dirt.

3. The surface is then rinsed with water, preferably at ambient temperature, which functions to produce a long-lasting finish. The water may be hot or cold. When the surface is in a very cold atmosphere, less water is needed to set the coating.

Although I do not wish to be bound by the theory involved, in my opinion, the step of finally rinsing with cold water serves the function of removing the solvents and helping to set the active ingredients and the wax residue.

The resultant finish takes on the characteristic of a high-gloss satin finish and there is no film which needs to be removed. The water can then be blown or wiped off. Alternatively, the water may be left on a vehicle and as the vehicle is driven, the water will be blown off by the movement of the vehicle leaving a polished finish.

It can thus be seen that in accordance with the invention, rubbing and buffing is entirely eliminated. By a slight wiping, an even better polished surface is obtained which will have a longer life.

The cleaning and protective coating composition of the present invention has the further advantage of providing rust inhibiting protective coating to the surface. The composition does not utilize any detergent and thereby obviates the adverse effects of such detergent on painted surfaces.

In order to clean surfaces that have not been cleaned for some time and which require rubbing to remove fading or which have unevenly painted surfaces or have substantial quantities of dirt, it has been found that various materials may be added which provide a slight abrasive action which will facilitate the removal of the dirt.

Where the surface being treated is a metal finish such as a car, the additives may comprise silica, baking soda and abrasive material such as coconut shells. A typical silica which may be used is commercially available under the trademark "HYFLO" by John Manville Products Corporation.

Typical compositions which are suitable for treating metal, glass and the like, which require severe cleaning, are as follows by weight:

Table V

Silica	20	—	50
Baking Soda	5	—	25
Water	10	—	10
Composition of Table I	40	50	15
Ground Coconut Shells	5	25	—
Microcrystalline Wax	20	25	—
	100	100	100

The cleaning composition of Table V is applied directly on a dry surface with a soft cloth or wheel preferably in a circular motion with light pressure. A portion of the composition of Tables I and II is then applied over this composition and rinsed with water. The resultant coating produces a very long-lasting polished and protective finish which also has rust inhibiting compositions. The composition may be used on painted wood surfaces, silver, brass, copper and the like.

For treating aluminum and similar surfaces, the following compositions by weight have been found satisfactory:

Table VI

Silica	40
Baking Soda	5
Composition of Table I	50
Ground Coconut Shells	5

The cleaning composition including the additives is applied in the usual fashion. The surface is then rubbed or buffed and a coating of the composition of the above Table II is applied in the manner heretofore described.

I claim:

1. A cleaning and protective coating composition consisting essentially of a mixture of wax residue such as paraffin and microcrystalline wax, perchlorethylene, petroleum distillate having a boiling point ranging between 350° and 380°F., and a nonionic surfactant such as nonylphenoxypoly(ethyleneoxy)ethanol and a small amount of [N,N,N',N'-tetrakis(2-hydroxypropyl)ethylenediamine].

2. The composition set forth in claim 1 wherein said paraffin wax comprises at least 3%, said microcrystalline wax comprises at least 2%, said nonionic surfactant comprises at least 1% and said ethylenediamine comprises at least 1%.

3. The composition set forth in claim 1 including butyl cellusolve.

4. The composition set forth in claim 1 including an hexogen octoate drier and ethylene glycol n-butyl ether.

5. The method of treating a surface to clean and protect the same which comprises applying a coating of a composition consisting essentially of a mixture of wax residue such as paraffin and microcrystalline wax, perchloroethylene, petroleum distillate having a boiling point ranging between 350° and 380°F., and a nonionic surfactant such as nonylphenoxypoly(ethyleneoxy)ethanol and a small amount of [N,N,N',N'-tetrakis(2-hydroxypropyl) ethylenediamine], and thereafter setting the applied coating by treating the surface with water.

6. The method set forth in claim 1 wherein said paraffin wax comprises at least 3%, said microcrystalline wax comprises at least 2%, said nonionic surfactant comprises at least 1%, and said ethylenediamine comprises at least 1%.

* * * * *

United States Patent [19]

Kaliardos [11] 4,356,036

[45] Oct. 26, 1982

[54] ANTI-CORROSION COATING FOR METALS

[76] Inventor: Nicolas Kaliardos, 10725 Morang Ave., Detroit, Mich. 48224

[21] Appl. No.: 279,865

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Primary Examiner—Lorenzo B. Hayes

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[57] ABSTRACT

An anti-corrosion coating for metals comprising a mixture of aluminum paste or zinc paste, microcrystalline wax, aromatic hydrocarbon resin, chlorinated rubber, neutral barium sulfonate, chlorinated solvent, aromatic hydrocarbon solvent, and mineral spirits.

7 Claims, No Drawings

ANTI-CORROSION COATING FOR METALS

This invention relates to anti-corrosion coatings and particularly such coatings for fabricated steel parts.

BACKGROUND AND SUMMARY OF THE INVENTION

In the manufacture of automobiles and the like, there is a tendency for fabricated metal parts, such as steel parts, to corrode even after painting especially in the inside areas where portions of the metal are folded into close proximity to other portions and not painted.

Accordingly, among the objectives of the invention are to provide anti-corrosion compositions for metal which will protect the metal surfaces against corrosion even when portions of the part are folded on one another.

Basically, the anti-corrosion composition embodying the invention comprises a mixture of aluminum paste or zinc paste, microcrystalline wax, aromatic hydrocarbon resin, chlorinated rubber, natural barium sulfonate, chlorinated solvent, aromatic hydrocarbon solvent and mineral spirits.

Aluminum paste is well known material comprising 65-75% aluminum flake, by weight, and 25-35% solvent such as mineral spirits, by weight. Typical aluminum pastes are sold by Aluminum Company of America under the designations Standard Paste Nos. 6221 and 6240.

Zinc paste is a well known material comprising zinc flake and solvent such as mineral spirits. Typical zinc pastes are sold by United States Bronze Powders, Inc., under the designation Zinc Flake Paste 751.

The term microcrystalline wax is well understood in the art. A typical microcrystalline wax is sold by Shell Chemical Company under the trademark SHELLMAX 500 and has the following properties:

	ASTM	
Flash Point, C.O.C., °F.	D-92	565
Penetration, Needle	D-1321	
at 77° F.		21
at 100° F.		52
at 110° F.		125
Oil Content, % Wt.	D-721	0.9
Refractive Index	D-1747	
at 100° C.		1.4440
Lbs./Gal.		
at 60° F.		7.75
at 210° F.		6.67

Another microcrystalline wax that has given satisfactory results is made by Mobil Oil Corporation and sold under the trademarks Mobilwax 2305 and Mobilwax 2305 BR having the following properties:

	Mobilwax 2305	Mobilwax 2305 BR
Melting Point, °F. (ASTM-127)	176	176
Color, ASTM	2	2.5
Viscosity at 210° F. SUS	86	160
Needle Penetration at 77° F.	27	27
at 108° F.	95	95
at 115° F.	130	130
Oil Content, %	4.0	4.0
Flash Point, °F. (COC)	540	540
Wgt./Gal.lbs at 180° F.	6.71	6.71
Wgt./Gal.lbs at 60° F.	7.74	7.74

Aromatic hydrocarbon resins are low molecular weight, nonpolar, amber-colored thermoplastic resins produced from petroleum derived monomers. Typical resins are sold by Hercules Incorporated, Wilmington, Del., under the trademark PICCO.

Satisfactory results have been achieved utilizing resins sold by Hercules Incorporated under the trademark PICCO and having the following properties:

		PICCO RESIN						
		6070	6100	6110	6115	6120	6130	6140
Softening point, R&B °C.		68–73	98–102	108–112	113–118	118–122	128–132	140–144
Color, Gardner, max		12	11	11	11	12	12	12
Viscosity at 25° C. 70% solids in toluene								
Gardner-Holdt		E-H	R-U	T-X	V-Y	U-Y	—	—
Stokes		—	—	—	—	—	15–27	27–55
TYPICAL PROPERTIES								
Softening point, R&B °C.		70	100	110	115	120	130	140
Color, Gardner		11	9	9	9	11	11	11
Viscosity at 25° C. 70% solids in toluene								
Gardner-Holdt		G	T	V	W	X	—	—
Stokes		—	—	—	—	—	21	38
Acid number		<1	<1	<1	<1	<1	<1	<1
Saponification number		<1	<1	<1	<1	<1	<1	<1
Bromine number		3.8	6.7	5.3	5.2	11.7	14.0	21.4
Density at 25° C.:	lbs/gal	8.50	8.83	8.86	8.86	8.91	8.91	8.91
	kg/L	1.02	1.06	1.07	1.07	1.07	1.07	1.07
Flash point, COC:	°F.	460	475	490	500	520	525	530
	°C.	237	246	254	260	271	274	277
Melt viscosity, °C.:	1 poise	170	195	205	217	222	229	245
	10 poises	135	157	171	178	181	190	205
	100 poises	110	133	141	151	154	164	180

Melt Point, °F.	Test Method	500
	D-127	141
Color, ASTM	D-1500	L1.2.0

Chlorinated rubber is a rubber that contains 66+% combined chlorine. Typical chlorinated rubbers are manufactured by Hercules Incorporated, Wilmington,

Del., and sold under the trademark Parlon and having the following properties:

PROPERTIES	
Freezing Point	−9° F.(−23° C.)
Pounds per gallon at 25° C.	13.47
Refractive index at 25° C.	1.503
Viscosity at 25° C., centipoises	0.84
Flash Point	none
Fire Point	none
Heat of vaporization at b.p.:	
-Cal./g	50.01
BTU/lb.	90.2
Specific Heat, cal./g° C.	0.21

*Dow Method of Analysis 59015

The petroleum distillate may be one of the various types preferably having a boiling point ranging from 350° to 380° F.

A typical petroleum distillate is generally known in the trade as Solvent 140. For example, such a solvent is sold by Shell Chemical Company under the designation Shell Sol 140 having the following properties:

PROPERTY	TEST METHOD	Shell Sol 140
Specific Gravity at 60° F.	ASTM D-1250	0.786
Gravity, °API	ASTM D-287	48.5
Pounds per Gallon at 60° F.	ASTM D-1250	6.55
Color, Saybolt	ASTM D-156	+30
Kauri-Butanol Number	ASTM D-1133	31
Aniline Point, °F.	ASTM D-611/D-1012	155
Mixed Aniline Point °F.	ASTM D-611/D-1012	—
Flash Point, T.C.C., °F.	ASTM D-56	141
Distillation, °F.	ASTM D-86	
IBP		370
10% Recovered	371	
30%		372
50%		373
70%		375
90%		378
Dry Point		—
End Point		408
Evaporation Rate, Seconds	Shell Evapo-Rater	
10%		1050
30%		3230
50%		5470
70%		7830
90%		10400
100%		13700
Composition, % Volume		
Paraffins		48.4
Naphthenes		47.7
Aromatics(total)		3.9
Toluene plus		0.0
Ethyl Benzene		
C_8 plus Aromatics excluding EB		3.9

A similar solvent is sold by Grow Solvent Company, Inc., under the designation Solvent GS 140 and has the following properties:

A.S.T.M. DISTILLATION:		
I.B.P.	363° F.	183.0° C.
5%	366	185.6
10%	367	186.1
20%	368	186.7
30%	369	187.2
40%	370	187.8
50%	371	188.3
60%	372	188.9

-continued

A.S.T.M. DISTILLATION:		
70%	373	189.4
80%	374	190.0
90%	376	191.1
95%	379	192.8
Dry Point	383	195.0

A.P.I. Gravity at 60° F.	51.2°
Specific Gravity at 60/60° F.	0.7745
Weight Per Gallon at 60° F.	6.448
Straight Aniline Point 67.8° C.	
**Kauri Butanol Value	29.4 cc
Tag Closed Cup Flash Point	143° F.
Copper Strip Corrosion	Very Slight Tarnish

**Corrected to Toluol at 105.0 cc

Chlorinated solvent may comprise any one of the number of well-known solvents such as perchloroethylene.

A typical perchloroethylene is such as sold by The Dow Chemical Company under the designation "Special Vapor Degreasing Grade" having the following specifications and properties:

SPECIFICATION*	
Appearance	Clear, free of sediment and suspended matter
Color APHA, Maximum	15
Distillation Range, at 760, IBP-DP	118-122° C.
Water Content, Maximum Karl Fischer Method, ppm	30 ppm
Non Volatile Matter, Maximum	25 ppm
Free Halogens, Maximum	none
Acidity (as HCl) Maximum	none
Alkalinity (as NaOH) Maximum	30 ppm
Specific Gravity at 25/25° C.	1.614–1.622
Acid Acceptance (as NaOH)	
by Titration	0.149–0.176
By Calculation	0.156–0.190
Stability with Copper	Passes test

Dow Method of Analysis 39015

A typical barium sulfonate is manufactured by Witco Chemical Corporation, New York, N.Y., under the trademark Neutral Barium Petronate 50-S and is a synthetic barium sulfonate having the following typical tests:

% Barium sulfonate	50.3
% Barium	6.9
% Mineral oil	49.5
% Water	0.2
Total alkalinity	3.4 mg KOH/g
Saybolt viscosity @ 210° F.	100
Equivalent weight	
as Sodium	460
as Barium	1011
ASTM Dilute Color	1.5

The compositions embodying the invention may have the following range of compositions by weight:

	%
Aluminum paste or zinc paste	15–43
Microcrystalline wax	.5–4
Aromatic hydrocarbon resin	10–18
Chlorinated rubber	2–6
Neutral barium sulfonate	.5–1
Chlorinated solvent	7–23
Aromatic hydrocarboo solvent	22–32

-continued

	%
Mineral spirits	1.3–4

The compositions embodying the invention and utilizing aluminum may have the following ranges of composition by weight:

	%
Aluminum paste	21-28
Microcrystalline wax	1.3-3.5
Aromatic hydrocarbon resin	7-23
Neutral barium sulfonate	.5-1
Chlorinated solvent	7-23
Aromatic hydrocarbon solvent	23-42
Mineral spirits	1.3-3.5

In the above aluminum compositions, the chlorinated solvent is preferably perchloroethylene and the aromatic hydrocarbon solvents are preferably toluene ranging from 8–14% by weight and xylene ranging from 15-28% by weight.

The compositions embodying the invention and utilizing zinc may have the following ranges of compositions by weight:

	%
Zinc paste	15–43
Microcrystalline wax	.5–4
Aromatic hydrocarbon resin	10–18
Neutral barium sulfonate	.5–1
Chlorinated solvent	7–23
Aromatic hydrocarbon solvent	23–42
Mineral spirits	1.9–4

In the above zinc compositions, the chlorinated solvent is preferably perchloroethylene and the aromatic hydrocarbon solvents are preferably toluene ranging from 11–16% by weight and xylene ranging from 11–16% by weight.

Specific examples of the compositions are as follows:

	EXAMPLE 1		EXAMPLE 2	
	Weight	Percent	Weight	Percent
6221 Aluminum Paste Pigment	3 lbs	23	2 lbs	21
Picco Resin 6140-Flake	3 lbs	23	2 lbs	21
Perchloroethylene	3 lbs	23	2 lbs	21
Toluene	1 lb	8	1 lb	10
Xylene	2 lbs	15	2 lbs	21
Wax	3 oz	1.5	2 oz	1.3
Mineral Spirits	3 oz	1.5	2 oz	1.3
Igepal	4 drops		2 drops	
Neutral Barium Petronate	1 oz	.5	1 oz	
Parlon S10	4 oz	2	2 oz	1.3
Parlon S20	4 oz	2	2 oz	1.3
Cellusolve Acetate	4 oz	2		.5
TOTAL	13 lbs 3 oz	101%	9 lbs 6 oz	99.8%

	EXAMPLE 3		EXAMPLE 4	
	Weight	Percent	Range	Percent
Alcoa Aluminum Pigment	2 lbs	23.2	2 lbs	28.3
Picco Resin 6140 - Flake	1 lb 8 oz	17.4	8 oz	7
Perchloroethylene	1 lb 8 oz	17.4	8 oz	7

6

-continued

	EXAMPLE 3		EXAMPLE 4	
	Weight	Percent	Range	Percent
Toluene	1 lb	11.6	1 lb	14.2
Xylene	2 lbs	23.2	2 lbs	28.3
Wax	2 oz	1.5	4 oz	3.5
Mineral Spirits	2 oz	1.5	4 oz	3.5
Igepal	1 oz	.7	0	0
Neutral Barium Petronate	1 oz	.7	1 oz	.9
Parlon S10	2 oz	1.5	4 oz	3.5
Parlon S20	2 oz	1.5	4 oz	3.5
TOTAL	8 lbs 10 oz	100.2%	7 lbs 1 oz	99.7%

	EXAMPLE 5		EXAMPLE 6	
	Weight	Percent	Range	Percent
Zinc Flake	2 lbs	23.2	2 lbs	30.2
Perchloroethylene	2 lbs	23.2	1 lb	15.1
Xylene	1 lb	11.6	1 lb	15.1
Toluene	1 lb	11.6	1 lb	15.1
Mineral Spirits	4 oz	2.9	2 oz	1.9
6140 Picco Resin Flake	1 lb 8 oz	17.4	1 lb	15.1
Wax	4 oz	2.9	2 oz	1.9
Parlon S10	4 oz	2.9	2 oz	1.9
Parlon S20	4 oz	2.9	2 oz	1.9
Neutral Barium Petronate	1 oz	.7	1 oz	.9
Cellusolve Acetate	1 oz	.7	1 oz	.9
TOTAL	8 lbs 10 oz	100.0%	6 lbs 10 oz	100.0%

	EXAMPLE 7		EXAMPLE 8	
	Weight	Percent	Range	Percent
Zinc Flake	4 lbs	31.4	6 lbs	43.1
Xylene	2 lbs	15.7	2 lbs	14.3
Toluene	2 lbs	15.7	2 lbs	14.3
Perchloroethylene	1 lb	7.9	1 lb 8 oz	10.8
Parlon S10	8 oz	3.9	6 oz	2.7
Wax	8 oz	3.9	1 oz	.5
Neutral Barium Petronate	2 oz	.9	1 oz	.5
Cellusolve Acetate	2 oz	.9	1 oz	.5
6140 Picco Resin Flake	2 lbs	15.7	1 lb 8 oz	10.8
Mineral Spirits	8 oz	3.9	6 oz	2.7
TOTAL	12 lbs 12 oz	99.9%	13 lbs 15 oz	100.2%

The various compositions heretofore described have been tested and have been found to provide good corrosion resistance on bare steel panels in a salt cabinet for over 360 hours, humidity resistance for over 500 hours,

no blistering, partial immersion salt solution resistance for at least 260 hours, partial immersion detergent solution resistance for at least 260 hours, and good adhesion.

The composition embodying the invention is preferably made by first separately mixing a wax emulsion, a chlorinated rubber emulsion, and an aromatic hydrocarbon resin emulsion. In a typical example, the mixing is as follows:

	Wax Emulsion	
	Per Gallon	% By Weight
Mineral spirits	4 lbs	43%
Microcrystalline wax (180° F. melting point)	4 lbs	43%
Perchloroethylene	16 oz	11%
Neutral Barium Petronate	4 oz	2%
Igepal	1 oz	1%
TOTAL	9 lbs 5 oz	

Procedure: Heat and emulsify wax in mineral spirits. When dissolved and clear, add perchloroethylene, Igepal and Neutral Barium Petronate. Heat until clear. Cool.

	Chlorinated Rubber Emulsion		
	Per Gallon		% By Weight
Parlon S10	1 lb	5.33 oz	17%
Parlon S20	1 lb	5.33 oz	17%
Xylene	5 lbs	5.33 oz	66%
TOTAL	8 lbs		

Procedure: Dissolve at room temperature until clear.

	Aromatic Hydrocarbon Resin Emulsion	
	Per Gallon	% By Weight
Picco 6140 Flake	1 lb	50%
Perchloroethylene	1 lb	50%
TOTAL	2 lbs	

Procedure: Dissolve at room temperature until clear.

	Per Gallon	% By Weight
Picco 6140 Flake	1 lb	50%
Perchloroethylene	1 lb	50%
TOTAL	2 lbs	

Procedure: Dissolve at room temperature until clear.

Preparation For Final Composition of Aluminum Anti-Corrosion Wax Type Coating

Place all solvents by weight in container. Place premixed resin emulsion in solvent mixture. Place premixed wax emulsion in solvent mixture. Place premixed Parlon emulsion in solvent mixture. Stir for a maximum of 2 minutes.

Add aluminum pigment and stir. Do not shake.

Add AL 161 Syloid and AL 1 Syloid.

Add cellusolve acetate.

The following results are from tests administered on bare steel:

1. Flash point—not less than 11.7° C. (53° F.).
2. Storage stability—composition remains stable after 6 months at 23.8° C. (75° F.).
3. Sprayability—composition is sprayable without sagging or build up at bottom of panel.
4. High temperature flow point—composition does not sag, separate, or degenerate when exposed to temperatures up to 200° F.
5. Toxicity—composition is not toxic when applied or in the dry state.

6. Viscosity—12-15 seconds in Fisher #2 cup after 10 minute agitation.
7. Salt spray corrosion resistance—withstands 360 hours exposure without base metal corrosion, adhesion loss, blisters or wrinkles.
8. Salt solution partial immersion test—withstands 7 days partial immersion in 5% salt tap water solution in an enclosed jar without corrosion, adhesion loss, blisters, or wrinkles. Immersion jar is placed inside a high-humidity cabinet, 100% relative humidity at 100° F. to maintain constant temperature.
9. Detergent solution partial immersion test—withstands 7 days in solution composed of 10 grams of DuPont #7 car wash compound per gallon of tap water without corrosion, adhesion loss, blisters or wrinkles.
10. Environmental corrosion—withstands 10 cycles without corrosion, adhesion loss, blisters or wrinkles.
11. Humidity resistance—withstands 500 hours humidity exposure. Humidity cabinet is maintained at 100% relative humidity at 100° F. Composition does not develop corrosion, adhesion loss, blisters or wrinkles.
12. Cold impact—withstands 2.8 joules (25 inch pounds) reverse impacts at −30° C. (−20° F.) without showing separation of wax from the substrate.
13. The anti-corrosion coating is removable from any topcoat surface without staining or discoloring the topcoat (painted surface).

The use of perchloroethylene is very important because it cleans and dissolves any oil present on the surface and allows the coating to make good contact with the surface. If bare steel is to be coated, I recommend that it be cleaned with perchloroethylene first. If the surface is contaminated with oil or grease, perchloroethylene will facilitate the adhesion process. The Parlon provides water and detergent resistance and helps prevent rust from starting. The wax and barium sulfonate

keep the coating soft and prevent rust and moisture from creeping in. The aluminum pigment forms a protective finishing layer over the other ingredients.

This invention, when properly applied to a clean surface, will provide rust prevention especially in crevices and hard to reach places for all metals. This coating should not be oven dried. Up to 200° F. may be applied to the surface and sagging will not occur. It will air dry in 5–10 minutes at room temperature. This composition is primarily for automobiles, inside the entire body, and especially for crevices, bottoms of doors, around plate glass, behind bumpers, on all frames, and all sheet metal whether galvanized or not. It has an advantage over zinc in that it requires less aluminum pigment and provides equal if not more protection. It provides good protection on bare, zinc-coated, or prime steel. I believe that the above compositions will provide good protection for pre-rusted surfaces such as highway bridges, for steel frames, cracked surfaces between steel frames and cement, and for water towers and other surfaces which retain moisture, detergent residue, or salt and are prone to rust.

I claim:

1. An anti-corrosion coating composition comprising a mixture of aluminum paste or zinc paste containing aluminum or zinc flakes and a solvent, microcrystalline wax, aromatic hydrocarbon resin having a softening point, R and B, of 70° C.–140° C., chlorinated rubber having a combined chlorine content of at least 66%,

neutral barium sulfonate, chlorinated solvent, aromatic hydrocarbon solvent and mineral spirits.

2. The anti-corrosion coating composition set forth in claim 1 wherein said composition comprises by weight:

	%
aluminum paste or zinc paste	15–43
microcrystalline wax	.5–4
aromatic hydrocarbon resin	10–18
chlorinated rubber	2–6
neutral barium sulfonate	.5–1
chlorinated solvent	7–23
aromatic hydrocarbon solvent	22–32
mineral spirits	1.3–4

3. The anti-corrosion coating composition set forth in claim 1 wherein said composition comprises by weight:

	%
aluminum paste	21–28
microcrystalline wax	1.3–3.5
aromatic hydrocarbon resin	7–23
neutral barium sulfonate	.5–1
chlorinated solvent	7–23
aromatic hydrocarbon solvent	23–42

-continued

	%
mineral spirits	1.3–3.5

4. The anti-corrosion coating composition set forth in claim 1 wherein said composition comprises by weight:

	%
zinc paste	15–43
microcrystalline wax	.5–4
aromatic hydrocarbon resin	10–18
neutral barium sulfonate	.5–1
chlorinated solvent	7–23
aromatic hydrocarbon solvent	23–42
mineral spirits	1.9–4

5. The anti-corrosion coating composition set forth in claim 1 wherein said chlorinated solvent comprises perchloroethylene.

6. The anti-corrosion coating composition set forth in claim 1 wherein said aromatic hydrocarbon solvent comprises toluene and xylene.

7. The anti-corrosion coating composition set forth in claim 1 wherein the composition is produced by separately preparing a wax emulsion, a chlorinated rubber emulsion, and an aromatic hydrocarbon resin emulsion and thereafter mixing the several emulsions.

* * * * *

§ 271. Infringement of patent

(a) Except as otherwise provided in this title, whoever without authority makes, uses or sells any patented invention, within the United States during the term of the patent therefor, infringes the patent.

(b) Whoever actively induces infringement of a patent shall be liable as an infringer.

(c) Whoever sells a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer.

(d) No patent owner otherwise entitled to relief for infringement or contributory infringement of a patent shall be denied relief or deemed guilty of misuse or illegal extension of the patent right by reason of his having done one or more of the following: (1) derived revenue from acts which if performed by another without his consent would constitute contributory infringement of the patent; (2) licensed or authorized another to perform acts which if performed without his consent would constitute contributory infringement of the patent; (3) sought to enforce his patent rights against infringement or contributory infringement.

Rule 11. Signing of Pleadings, Motions, and Other Papers; Sanctions

Every pleading, motion, and other paper of a party represented by an attorney shall be signed by at least one attorney of record in his individual name, whose address shall be stated. A party who is not represented by an attorney shall sign his pleading, motion, or other paper and state his address. Except when otherwise specifically provided by rule or statute, pleadings need not be verified or accompanied by affidavit. The rule in equity that the averments of an answer under oath must be overcome by the testimony of two witnesses or of one witness sustained by corroborating circumstances is abolished. The signature of an attorney or party constitutes a certificate by him that he has read the pleading, motion, or other paper; that to the best of his knowledge, information, and belief formed after reasonable inquiry it is well grounded in fact and is warranted by existing law or a good faith argument for the extension, modification, or reversal of existing law, and that it is not interposed for any improper purpose, such as to harass or to cause unnecessary delay or needless increase in the cost of litigation. If a pleading, motion, or other paper is not signed, it shall be stricken unless it is signed promptly after the omission is called to the attention of the pleader or movant. If a pleading, motion, or other paper is signed in violation of this rule, the court, upon motion or upon its own initiative, shall impose upon the person who signed it, a represented party, or both, an appropriate sanction, which may include an order to pay to the other party or parties the amount of the reasonable expenses incurred because of the filing of the pleading, motion, or other paper, including a reasonable attorney's fee.

Rule 34. Production of Documents and Things and Entry Upon Land for Inspection and Other Purposes

(a) Scope. Any party may serve on any other party a request (1) to produce and permit the party making the request, or someone acting on his behalf, to inspect and copy, any designated documents (including writings, drawings, graphs, charts, photographs, phono-records, and other data compilations from which information can be obtained, translated, if necessary, by the respondent through detection devices into reasonably usable form), or to inspect and copy, test, or sample any tangible things which constitute or contain matters within the scope of Rule 26(b) and which are in the possession, custody or control of the party upon whom the request is served; or (2) to permit entry upon designated land or other property in the possession or control of the party upon whom the request is served for the purpose of inspection and measuring, surveying, photographing, testing, or sampling the property or any designated object or operation thereon, within the scope of Rule 26(b).

(b) Procedure. The request may, without leave of court, be served upon the plaintiff after commencement of the action and upon any other party with or after service of the summons and complaint upon that party. The request shall set forth the items to be inspected either by individual item or by category, and describe each item and category with reasonable particularity. The request shall specify a reasonable time, place, and manner of making the inspection and performing the related acts.

The party upon whom the request is served shall serve a written response within 30 days after the service of the request, except that a defendant may

Rule 36. Requests for Admission

(a) Request for Admission. A party may serve upon any other party a written request for the admission, for purposes of the pending action only, of the truth of any matters within the scope of Rule 26(b) set forth in the request that relate to statements or opinions of fact or of the application of law to fact, including the genuineness of any documents described in the request. Copies of documents shall be served with the request unless they have been or are otherwise furnished or made available for inspection and copying. The request may, without leave of court, be served upon the plaintiff after commencement of the action and upon any other party with or after service of the summons and complaint upon that party.

Each matter of which an admission is requested shall be separately set forth. The matter is admitted unless, within 30 days after service of the request, or within such shorter or longer time as the court may allow, the party to whom the request is directed serves upon the party requesting the admission a written answer or objection addressed to the matter, signed by the party or by his attor-

defendant shall not be required to serve answers or objections before the expiration of 45 days after service of the summons and complaint upon him. If objection is made, the reasons therefor shall be stated. The answer shall specifically deny the matter or set forth in detail the reasons why the answering party cannot truthfully admit or deny the matter. A denial shall fairly meet the substance of the requested admission, and when good faith requires that a party qualify his answer or deny only a part of the matter of which an admission is requested, he shall specify so much of it as is true and qualify or deny the remainder. An

answering party may not give lack of information or knowledge as a reason for failure to admit or deny unless he states that he has made reasonable inquiry and that the information known or readily obtainable by him is insufficient to enable him to admit or deny. A party who considers that a matter of which an admission has been requested presents a genuine issue for trial may not, on that ground alone, object to the request; he may, subject to the provisions of Rule 37(c), deny the matter or set forth reasons why he cannot admit or deny it.

The party who has requested the admissions may move to determine the sufficiency of the answers or objections. Unless the court determines that an objection is justified, it shall order that an answer be served. If the court determines that an answer does not comply with the requirements of this rule, it may order either that the matter is admitted or that an amended answer be served. The court may, in lieu of these orders, determine that final disposition of the request be made at a pre-trial conference or at a designated time prior to trial. The provisions of Rule 37(a)(4) apply to the award of expenses incurred in relation to the motion.

(b) **Effect of Admission.** Any matter admitted this rule is conclusively established unless irt on motion permits withdrawal or amend- f the admission. Subject to the provisions of 5 governing amendment of a pre-trial order, irt may permit withdrawal or amendment he presentation of the merits of the action subserved thereby and the party who l the admission fails to satisfy the court :hdrawal or amendment will prejudice him :aining his action or defense on the merits. nission made by a party under this rule is

purpose of the pending action only and is
dmission by him for any other purpose nor
e used against him in any other proceeding.

led Dec. 27, 1946, eff. Mar. 19, 1948; Mar. 30,
July 1, 1970.)

serve a response within 45 days after service of the summons and complaint upon that defendant. The court may allow a shorter or longer time. The response shall state, with respect to each item or category, that inspection and related activities will be permitted as requested, unless the request is objected to, in which event the reasons for objection shall be stated. If objection is made to part of an item or category, the part shall be specified. The party submitting the request may move for an order under Rule 37(a) with respect to any objection to or other failure to respond to the request or any part thereof, or any failure to permit inspection as requested.

A party who produces documents for inspection shall produce them as they are kept in the usual course of business or shall organize and label them to correspond with the categories in the request.

(c) Persons Not Parties. This rule does not preclude an independent action against a person not a party for production of documents and things and permission to enter upon land.

(As amended Dec. 27, 1946, eff. Mar. 19, 1948; Mar. 30, 1970, eff. July 1, 1970; Apr. 29, 1980, eff. Aug. 1, 1980.)

Rule 37. Failure to Make or Cooperate in Discovery: Sanctions

(a) Motion for Order Compelling Discovery. A party, upon reasonable notice to other parties and all persons affected thereby, may apply for an order compelling discovery as follows:

(1) *Appropriate Court.* An application for an order to a party may be made to the court in which the action is pending, or, on matters relating to a deposition, to the court in the district where the deposition is being taken. An application for an order to a deponent who is not a party shall be made to the court in the district where the deposition is being taken.

(2) *Motion.* If a deponent fails to answer a question propounded or submitted under Rules 30 or 31, or a corporation or other entity fails to make a designation under Rule 30(b) (6) or 31(a), or a party fails to answer an interrogatory submitted under Rule 33, or if a party, in response to a request for inspection submitted under Rule 34, fails to respond that inspection will be permitted as requested or fails to permit inspection as requested, the discovering party may move for an order compelling an answer, or a designation, or an order compelling inspection in accordance with the request. When taking a deposition on oral examination, the proponent of the question may complete or adjourn the examination before he applies for an order.

If the court denies the motion in whole or in part, it may make such protective order as it would have been empowered to make on a motion made pursuant to Rule 26(c).

(3) *Evasive or Incomplete Answer.* For purposes of this subdivision an evasive or incomplete answer is to be treated as a failure to answer.

(4) *Award of Expenses of Motion.* If the motion is granted, the court shall, after opportunity for hearing, require the party or deponent whose conduct necessitated the motion or the party or attorney advising such conduct or both of them to pay to the moving party the reasonable expenses incurred in obtaining the order, including attorney's fees, unless the court finds that the opposition to the motion was substantially justified or that other circumstances make an award of expenses unjust.

If the motion is denied, the court shall, after opportunity for hearing, require the moving party or the attorney advising the motion or both of them to pay to the party or deponent who opposed the motion the reasonable expenses incurred in opposing the motion, including attorney's fees, unless the court finds that the making of the motion was substantially justified or that other circumstances make an award of expenses unjust.

If the motion is granted in part and denied in part, the court may apportion the reasonable expenses incurred in relation to the motion among the parties and persons in a just manner.

(b) Failure to Comply with Order.

(1) *Sanctions by Court in District Where Deposition is Taken.* If a deponent fails to be sworn or to answer a question after being directed to do so by the court in the district in which the deposition is being taken, the failure may be considered a contempt of that court.

(2) *Sanctions by Court in Which Action is Pending.* If a party or an officer, director, or managing agent of a party or a person designated under Rule 30(b)(6) or 31(a) to testify on behalf of a party fails to obey an order to provide or permit discovery, including an order made under subdivi-

sion (a) of this rule or Rule 35, or if a party fails to obey an order entered under Rule 26(f), the court in which the action is pending may make such orders in regard to the failure as are just, and among others the following:

(A) An order that the matters regarding which the order was made or any other designated facts shall be taken to be established for the purposes of the action in accordance with the claim of the party obtaining the order;

(B) An order refusing to allow the disobedient party to support or oppose designated claims or defenses, or prohibiting him from introducing designated matters in evidence;

(C) An order striking out pleadings or parts thereof, or staying further proceedings until the order is obeyed, or dismissing the action or proceeding or any part thereof, or rendering a judgment by default against the disobedient party;

(D) In lieu of any of the foregoing orders or in addition thereto, an order treating as a contempt of court the failure to obey any orders except an order to submit to a physical or mental examination;

(E) Where a party has failed to comply with an order under Rule 35(a) requiring him to produce another for examination, such orders as are listed in paragraphs (A), (B), and (C) of this subdivision, unless the party failing to comply shows that he is unable to produce such person for examination.

In lieu of any of the foregoing orders or in addition thereto, the court shall require the party failing to obey the order or the attorney advising him or both to pay the reasonable expenses, including attorney's fees, caused by the failure, unless the court finds that the failure was substantially

justified or that other circumstances make an award of expenses unjust.

(c) Expenses on Failure to Admit. If a party fails to admit the genuineness of any document or the truth of any matter as requested under Rule 36, and if the party requesting the admissions thereafter proves the genuineness of the document or the truth of the matter, he may apply to the court for an order requiring the other party to pay him the reasonable expenses incurred in making that proof, including reasonable attorney's fees. The court shall make the order unless it finds that (1) the request was held objectionable pursuant to Rule 36(a), or (2) the admission sought was of no substantial importance, or (3) the party failing to admit had reasonable ground to believe that he might prevail on the matter, or (4) there was other good reason for the failure to admit.

(d) Failure of Party to Attend at Own Deposition or Serve Answers to Interrogatories or Respond to Request for Inspection. If a party or an officer, director, or managing agent of a party or a person designated under Rule 30(b)(6) or 31(a) to testify on behalf of a party fails (1) to appear before the officer who is to take his deposition, after being served with a proper notice, or (2) to serve answers or objections to interrogatories submitted under Rule 33, after proper service of the interrogatories, or (3) to serve a written response to a request for inspection submitted under Rule 34, after proper service of the request, the court in which the action is pending on motion may make such orders in regard to the failure as are just, and among others it may take any action authorized under paragraphs (A), (B), and (C) of subdivision (b)(2) of this rule. In lieu of any order or in addition thereto, the court shall require the party

failing to act or the attorney advising him or both to pay the reasonable expenses, including attorney's fees, caused by the failure, unless the court finds that the failure was substantially justified or that other circumstances make an award of expenses unjust.

The failure to act described in this subdivision may not be excused on the ground that the discovery sought is objectionable unless the party failing to act has applied for a protective order as provided by Rule 26(c).

(e) [Abrogated]

(f) [Repealed. Pub.L. 96–481, Title II, § 205(a), Oct. 21, 1980, 94 Stat. 2330.]

(g) Failure to Participate in the Framing of a Discovery Plan. If a party or his attorney fails to participate in good faith in the framing of a discovery plan by agreement as is required by Rule 26(f), the court may, after opportunity for hearing, require such party or his attorney to pay to any other party the reasonable expenses, including attorney's fees, caused by the failure.

(As amended Dec. 29, 1948, eff. Oct. 20, 1949; Mar. 30, 1970, eff. July 1, 1970; Apr. 29, 1980, eff. Aug. 1, 1980; Pub.L. 96–481, Title II, § 205(a), Oct. 21, 1980, 94 Stat. 2330.)

SUPPLEMENTARY NOTE OF ADVISORY COMMITTEE REGARDING THIS RULE

Note. The operation of Rule 55(b) (Judgment) is directly affected by the Soldiers' and Sailors' Civil Relief Act of 1940, 50 U.S.C., Appendix, § 501 et seq. Section 200 of the Act [50 U.S.C.A. Appendix, § 520] imposes specific requirements which must be fulfilled before a default judgment can be entered, e.g., *Ledwith* v. *Storkan*, D.Neb.1942, 6 Fed.Rule Serv. 60b.24, Case 2, 2 F.R.D. 539, and also provides for the vacation of a judgment in certain circumstances. See discussion in Commentary, Effect of Conscription Legislation on the Federal Rules, 1940, 3 Fed.Rules Serv. 725; 3 Moore's Federal Practice, 1938, Cum.Supplement § 55.02.

Rule 56. Summary Judgment

(a) For Claimant. A party seeking to recover upon a claim, counterclaim, or cross-claim or to obtain a declaratory judgment may, at any time after the expiration of 20 days from the commencement of the action or after service of a motion for summary judgment by the adverse party, move with or without supporting affidavits for a summary judgment in his favor upon all or any part thereof.

(b) For Defending Party. A party against whom a claim, counterclaim, or cross-claim is asserted or a declaratory judgment is sought may, at any time, move with or without supporting affidavits for a summary judgment in his favor as to all or any part thereof.

(c) Motion and Proceedings Thereon. The motion shall be served at least 10 days before the time fixed for the hearing. The adverse party prior to the day of hearing may serve opposing affidavits. The judgment sought shall be rendered forthwith if

the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law. A summary judgment, interlocutory in character, may be rendered on the issue of liability alone although there is a genuine issue as to the amount of damages.

(d) Case Not Fully Adjudicated on Motion. If on motion under this rule judgment is not rendered upon the whole case or for all the relief asked and a trial is necessary, the court at the hearing of the motion, by examining the pleadings and the evidence before it and by interrogating counsel, shall if practicable ascertain what material facts exist without substantial controversy and what material facts are actually and in good faith controverted. It shall thereupon make an order specifying the facts that appear without substantial controversy, including the extent to which the amount of damages or other relief is not in controversy, and directing such further proceedings in the action as are just. Upon the trial of the action the facts so specified shall be deemed established, and the trial shall be conducted accordingly.

(e) Form of Affidavits; Further Testimony; Defense Required. Supporting and opposing affidavits shall be made on personal knowledge, shall set forth such facts as would be admissible in evidence, and shall show affirmatively that the affiant is competent to testify to the matters stated therein. Sworn or certified copies of all papers or parts thereof referred to in an affidavit shall be attached thereto or served therewith. The court may permit affidavits to be supplemented or opposed by depositions, answers to interrogatories, or further affidavits. When a motion for summary judgment is made and supported as provided in this

rule, an adverse party may not rest upon the mere allegations or denials of his pleading, but his response, by affidavits or as otherwise provided in this rule, must set forth specific facts showing that there is a genuine issue for trial. If he does not so respond, summary judgment, if appropriate, shall be entered against him.

(f) When Affidavits are Unavailable. Should it appear from the affidavits of a party opposing the motion that he cannot for reasons stated present by affidavit facts essential to justify his opposition, the court may refuse the application for judgment or may order a continuance to permit affidavits to be obtained or depositions to be taken or discovery to be had or may make such other order as is just.

(g) Affidavits Made in Bad Faith. Should it appear to the satisfaction of the court at any time that any of the affidavits presented pursuant to this rule are presented in bad faith or solely for the purpose of delay, the court shall forthwith order the party employing them to pay to the other party the amount of the reasonable expenses which the filing of the affidavits caused him to incur, including reasonable attorney's fees, and any offending party or attorney may be adjudged guilty of contempt.

(As amended Dec. 27, 1946, eff. Mar. 19, 1948; Jan. 21, 1963, eff. July 1, 1963.)

Rule 72. Magistrates, Pretrial Matters

(a) Nondispositive Matters. A magistrate to whom a pretrial matter not dispositive of a claim or defense of a party is referred to hear and determine shall promptly conduct such proceedings as are required and when appropriate enter into the record a written order setting forth the disposition of the matter. The district judge to whom the case is assigned shall consider objections made by the parties, provided they are served and filed within 10 days after the entry of the order, and shall modify or set aside any portion of the magistrate's order found to be clearly erroneous or contrary to law.

(b) Dispositive Motions and Prisoner Petitions. A magistrate assigned without consent of the parties to hear a pretrial matter dispositive of a claim or defense of a party or a prisoner petition challenging the conditions of confinement shall promptly conduct such proceedings as are required. A record shall be made of all evidentiary proceedings before the magistrate, and a record may be made of such other proceedings as the magistrate deems necessary. The magistrate shall enter into the record a recommendation for disposition of the matter, including proposed findings of fact when appropriate. The clerk shall forthwith mail copies to all parties.

A party objecting to the recommended disposition of the matter shall promptly arrange for the transcription of the record, or portions of it as all parties may agree upon or the magistrate deems sufficient, unless the district judge otherwise directs. Within 10 days after being served with a

copy of the recommended disposition, a party may serve and file specific, written objections to the proposed findings and recommendations. A party may respond to another party's objections within 10 days after being served with a copy thereof. The district judge to whom the case is assigned shall make a de novo determination upon the record, or after additional evidence, of any portion of

Rule 701. Opinion Testimony by Lay Witnesses

If the witness is not testifying as an expert, his testimony in the form of opinions or inferences is limited to those opinions or inferences which are (a) rationally based on the perception of the witness and (b) helpful to a clear understanding of his testimony or the determination of a fact in issue.

NOTES OF ADVISORY COMMITTEE ON PROPOSED RULES

The rule retains the traditional objective of putting the trier of fact in possession of an accurate reproduction of the event.

Limitation (a) is the familiar requirement of first-hand knowledge or observation.

Limitation (b) is phrased in terms of requiring testimony to be helpful in resolving issues. Witnesses often find difficulty in expressing themselves in language which is not that of an opinion or conclusion. While the courts have made concessions in certain recurring situations, necessity as a standard for permitting opinions and conclusions has proved too elusive and too unadaptable to particular situations for purposes of satisfactory judicial administration. McCormick § 11. Moreover, the practical impossibility of determining by rule what is a "fact," demonstrated by a century of litigation of the question of what is a fact for purposes of pleading under the Field Code, extends into evidence also. 7 Wigmore § 1919. The rule assumes that the natural characteristics of the adversary system will generally lead to an acceptable result, since the detailed account carries more conviction than the broad assertion, and a lawyer can be expected to display his witness to the best advantage. If he fails to do so, cross-examination and argument will point up the weakness. See Ladd, Expert Testimony, 5 Vand.L.Rev. 414, 415–417 (1952). If, despite these considerations, attempts are made to introduce meaningless assertions which amount to little more than choosing up sides, exclusion for lack of helpfulness is called for by the rule.

The language of the rule is substantially that of Uniform Rule 56(1). Similar provisions are California Evidence Code § 800; Kansas Code of Civil Procedure § 60–456(a); New Jersey Evidence Rule 56(1).

Rule 702. Testimony by Experts

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.

NOTES OF ADVISORY COMMITTEE ON PROPOSED RULES

An intelligent evaluation of facts is often difficult or impossible without the application of some scientific, technical, or other specialized knowledge. The most common source of this knowledge is the expert witness, although there are other techniques for supplying it.

Most of the literature assumes that experts testify only in the form of opinions. The assumption is logically unfounded. The rule accordingly recognizes that an expert on the stand may give a dissertation or exposition of scientific or other principles relevant to the case, leaving the trier of fact to apply them to the facts. Since much of the criticism of expert testimony has centered upon the hypothetical question, it seems wise to recognize that opinions are not indispensable and to encourage the use of expert testimony in non-opinion form when counsel believes the trier can itself draw the requisite inference. The use of opinions is not abolished by the rule, however. It will continue to be permissible for the experts to take the further step of suggesting the inference which should be drawn from applying the specialized knowledge to the facts. See Rules 703 to 705.

Whether the situation is a proper one for the use of expert testimony is to be determined on the basis of assisting the trier. "There is no more certain test for determining when experts may be used than the common

sense inquiry whether the untrained layman would be qualified to determine intelligently and to the best possible degree the particular issue without enlightenment from those having a specialized understanding of the subject involved in the dispute." Ladd, Expert Testimony, 5 Vand.L.Rev. 414, 418 (1952). When opinions are excluded, it is because they are unhelpful and therefore superfluous and a waste of time. 7 Wigmore § 1918.

The rule is broadly phrased. The fields of knowledge which may be drawn upon are not limited merely to the "scientific" and "technical" but extend to all "specialized" knowledge. Similarly, the expert is viewed, not in a narrow sense, but as a person qualified by "knowledge, skill, experience, training or education." Thus within the scope of the rule are not only experts in the strictest sense of the word, e.g., physicians, physicists, and architects, but also the large group sometimes called "skilled" witnesses, such as bankers or landowners testifying to land values.

§ 636. Jurisdiction, powers, and temporary assignment

(a) Each United States magistrate serving under this chapter shall have within the territorial jurisdiction prescribed by his appointment—

(1) all powers and duties conferred or imposed upon United States commissioners by law or by the Rules of Criminal Procedure for the United States District Courts;

(2) the power to administer oaths and affirmations, impose conditions of release under section 3146 of title 18, and take acknowledgements, affidavits, and depositions; and

(3) the power to conduct trials under section 3401, title 18, United States Code, in conformity with and subject to the limitations of that section.

(b)(1) Notwithstanding any provision of law to the contrary—

(A) a judge may designate a magistrate to hear and determine any pretrial matter pending before the court, except a motion for injunctive relief, for judgment on the pleadings, for summary judgment, to dismiss or quash an indictment or information made by the defendant, to suppress evidence in a criminal case, to dismiss or to permit maintenance of a class action, to dismiss for failure to state a claim upon which relief can be granted, and to involuntarily dismiss an action. A judge of the court may reconsider any pretrial matter under this subparagraph (A) where it has been shown that the magistrate's order is clearly erroneous or contrary to law.

(B) a judge may also designate a magistrate to conduct hearings, including evidentiary hearings, and to submit to a judge of the court proposed findings of fact and recommendations for the

disposition, by a judge of the court, of any motion excepted in subparagraph (A), of applications for posttrial relief made by individuals convicted of criminal offenses and of prisoner petitions challenging conditions of confinement.

(C) the magistrate shall file his proposed findings and recommendations under subparagraph

(B) with the court and a copy shall forthwith be mailed to all parties.

Within ten days after being served with a copy, any party may serve and file written objections to such proposed findings and recommendations as provided by rules of court. A judge of the court shall make a de novo determination of those portions of the report or specified proposed findings or recommendations to which objection is made. A judge of the court may accept, reject, or modify, in whole or in part, the findings or recommendations made by the magistrate. The judge may also receive further evidence or recommit the matter to the magistrate with instructions.

(2) A judge may designate a magistrate to serve as a special master pursuant to the applicable provisions of this title and the Federal Rules of Civil Procedure for the United States district courts. A judge may designate a magistrate to serve as a special master in any civil case, upon consent of the parties, without regard to the provisions of rule 53(b) of the Federal Rules of Civil Procedure for the United States district courts.

(3) A magistrate may be assigned such additional duties as are not inconsistent with the Constitution and laws of the United States.

(4) Each district court shall establish rules pursuant to which the magistrates shall discharge their duties.

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

NICOLAS KALIARDOS,

Plaintiff,

v.

GENERAL MOTORS CORPORATION, BASF CORPORATION, DAUBERT INDUSTRIES, INC., H.B. FULLER COMPANY, and H.B. FULLER AUTOMOTIVE PRODUCT, INC., jointly and severally,

Defendants.
_____/

Civil Action No. 88-73729

HONORABLE PAUL V. GADOLA
U.S. DISTRICT JUDGE

JUDGEMENT

The court, having reviewed the file in the above-entitled matter and the magistrate judge's October 7, 1993 report and recommendation, having accepted and adopted the report and recommendation as the findings and conclusions of the court, and having granted the motions for summary judgement of all of

the above-named defendants,

It is hereby ORDERED and ADJUDGED that plaintiff take nothing and that the action be dismissed on the merits.

It is further ORDERED that the clerk serve a copy of this judgement by United States mail on the counsel for plaintiff and on counsel for defendants.

Dated at Detroit, Michigan, this _____ day of _____, 1994.

APPROVED:

_____
PAUL V. GADOLA
UNITED STATES
DISTRICT JUDGE

JOHN P. MAYER

by: _____
Deputy Clerk

I declare under penalty of perjury that the foregoing is true and correct.

Nicolas Kalliardos
Pro Se, Petitioner
405 Moross Road
Grosse Pointe, Michigan
48236
(313) 884-6537

Executed:
March 21, 1995